

DE REBUS BROMELIACEARUM III

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ABSTRACT. This paper contains taxonomic and publication information for Bromeliaceae that was not included in, or which appeared after, the publication of L.B. Smith and R.J. Downs' *Flora Neotropica* Monograph 14, Part 1 (1974); Part 2 (1977); Part 3 (1979), and Luther and Sieff (1994, 1997). Refer to Luther and Sieff for additional information. For new taxa, the current article contains scientific names and their authors, publication sources and dates, country and province of origin, and locations of type specimens. Miscellaneous supplemental information is included where considered useful.

ABSTRACTO. Este trabajo contiene información taxonómica sobre Bromeliaceae la cual no fue incluida o que apareció después de la publicación de L.B. Smith y R.J. Downs en *Flora Neotropica* Monografía 14, Parte 1 (1974); Parte 2 (1977); Parte 3 (1979) y en Luther y Sieff (1994, 1997). Refiérese a Luther y Sieff para información adicional. Para los nuevos taxa se incluyen los nombres y los autores, las fuentes y las fechas de las publicaciones, el país y provincia de origen y la localización de los especímenes tipo. También, se incluye información complementaria donde se considera útil.

Key words: Bromeliaceae, Neotropics, taxonomy

INTRODUCTION

It is my intent in this paper to bring together all references to taxonomic changes for Bromeliaceae published prior to January 2001 and not included in *Flora Neotropica* Monograph 14 (hereinafter referred to as FNM 14) or in Luther and Sieff (1994, 1997). Also included are selected miscellaneous references to both old and new taxa that may be useful. The author solicits additions and corrections.

The format found here is directly comparable and supplementary to FNM 14. All entries are arranged in a numbered, systematic sequence based on that used in FNM 14. The first number given is the genus number. Whole numbers are as published in FNM 14. Genus numbers with a decimal point were not included in FNM 14 or have been reclassified since its publication. Where the original author stated affinity, that has been followed in most cases. Where relationships were not stated or were ambiguous, I have assigned the number based upon my understanding of the taxa involved.

Following the hyphen is the species number. Whole species numbers (with the exception of *Alcantarea*, *Canistropsis*, *Canistrum*, *Deuterocohnia*, *Edmundoa*, *Nidularium*, *Racinaea*, *Wittrockia*, *Werauhia*, and *Neoregelia* in part) are as published in FNM 14. Species with numbers containing a decimal point were not included in FNM 14 or have been reclassified since its publication. Numbers with a decimal reflect the apparent affinity of those species to taxa included in FNM 14. Where the original author stated affinity, that has been followed here in most cases. Where a relationship was not stated or was ambiguous, I have assigned a number based upon my understanding of the taxa involved. For both species and genera, the numbers to the right of the decimal point have been assigned in the order of publication, in most cases, and do not necessarily reflect the relationships among the "decimal taxa."

Directly following the species numbers are numerals or letters for infraspecific taxa, which are denoted as follows:

Subspecies are given whole Arabic numerals in parentheses, e.g., (2).

Varieties are given lower case letters, e.g., b.

Forms are given lower case Roman numerals, e.g., ii.

The sequence given infraspecific taxa is that used in FNM 14; for taxa not there included or for newly reclassified taxa, the sequence is based on publication date, in most cases, and does not necessarily reflect relationships among the infraspecific taxa.

Validly named and described natural hybrids are denoted by a zero (0), as are validly published taxa that I do not feel warrant being listed in a systematic compilation.

Following the numbers are the taxon's name and author. Orthographic corrections, mostly involving gender, have been made where appropriate. For new taxa, new combinations, and changes

in rank, the name and date of the publication are given. Basionyms are listed for new combinations and changes in rank.

Following the publication information for new taxa is the country of origin, and in most cases, a state, province, department, or similar geopolitical "type" locality. Locations of the holotype (HT) and isotypes (IT) are given using standard abbreviations as listed in Index Herbariorum Ed. 8 (Holmgren et al. 1990).

References for synonymy are listed after the equal (=) sign.

All entries concerning reclassification, synonymy, or miscellaneous supplementary notes, if not referenced, are based upon my understanding of the taxa involved.

BROMELIACEAE A.L. deJussieu. See Oliva-Esteve (2000), Grant and Zijlstra (1998), and especially Benzing (2000).

0 ×NIDUREGELIA A.D. Hawkes. See Grant and Zijlstra (1998: 117). Also see Leme (2000: 120, 178–181).

0-0 ×**Niduregelia edmundoi** (Leme) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 178–179. 2000.

BASIONYM: *Nidularium edmundoi* Leme, *Bradea* 4(34): 270–271, 277. 1986.

0-0 ×**Niduregelia fraudulenta** (Leme) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 179–180. 2000.

BASIONYM: *Nidularium fraudulentum* Leme, *Bradea* 4(39): 311–312, 321. 1987.

0-0 ×**Niduregelia lyman-smithii** (Leme) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 180–181. 2000.

BASIONYM: *Nidularium lyman-smithii* Leme, *Pabstia* 4(1): 6–7, 11. 1993.

1 PUYA Molina. See Ibisch (1998).

1-8.1 **P. vasquezii** Ibisch & E. Gross, *Revista Soc. Boliv. Bot.* 2(1): 26–30. 1998. Bolivia: Santa Cruz. [HT: LPB; IT: NY, USZ].

1-9.1 **P. entre-riosensis** Ibisch & E. Gross, *J. Bromeliad Soc.* 48(5): 217–220. 1998. Bolivia: Tarija. [HT: LPB; IT: HEID].

1-14.1 **P. claudiae** Ibisch, R. Vásquez & E. Gross, *J. Bromeliad Soc.* 49(3): 127, 132–133. 1999. Bolivia: Santa Cruz. [HT: LPB].

1-29.2 **P. cochabambensis** R. Vásquez & Ibisch, *Bromelie* 1/2000: 16–18. 2000. Bolivia: Cochabamba. [HT: LPB].

1-80 **P. minima** L.B. Smith.
SYN.: *Puya pusilla* H. Luther.

1-91.3 **P. roldanii** Betancur & Callejas, *Caldasia* 19(1–2): 78–81. 1997. Colombia: Antioquia. [HT: HUA; IT: SEL].

1-147.3 **P. pusilla** H. Luther, *Bromélia* 4(4): 30–32. "1997" 1998. Bolivia: Tarija. [HT: SEL; IT: LPB].

=*Puya minima* L.B. Smith. See Luther ("1998" a).

1-153.1 **P. ochroleuca** Betancur & Callejas, *Caldasia* 19(1–2): 74–77. 1997. Colombia: Antioquia. [HT: HUA; IT: COL].

1-163.1 **P. gilmartiniae** G.S. Varadarajan & Flores.
See Flores and Watson (2000).

1-168 **P. raimondii** Harms.

2 ENCHOLIRIUM Martius.

2-14 *E. glaziovii* Mez.
= *Encholirium subsecundum* (Baker) Mez. See Forzza and Wanderley (1998: 265–267).

2-15 **E. subsecundum** (Baker) Mez.
SYN.: *Encholirium glaziovii* Mez.

- 2-17.1 **E. crassiscapum** E. Gross, Trop. Subtrop. Pflanzenwelt 95: 7-8, 27. 1997. Brazil: Minas Gerais. [HT: HB].
- 2-27 **E. sazimae** Rauh.
= *Encholirium heloisae* (L.B. Smith) Forzza & Wanderley. See Forzza and Wanderley (1998: 264-266).
- 2-27.1 **E. heloisae** (L.B. Smith) Forzza & Wanderley, Bol. Bot. Univ. São Paulo 17: 264-266. 1998.
BASIONYM: *Dyckia heloisae* L.B. Smith, Smithsonian Misc. Collection 126: 26. 1955.
SYN.: *Encholirium sazimae* Rauh.

3 FOSTERELLA L.B. Smith. See Ibisch et al. (1999b).

- 3-1.1 **F. floridensis** Ibisch, R. Vásquez & E. Gross, Revista Soc. Boliv. Bot. 2(2): 120-125. 1999. Bolivia: Santa Cruz. [HT: LPB; IT: USZ, FR].
- 3-2.2 **F. cotacajensis** Kessler, Ibisch & E. Gross, Revista Soc. Boliv. Bot. 2(2): 111-116. 1999. Bolivia: Cochabamba. [HT: LPB; IT: SEL].
- 3-4.4 **F. chaparensis** Ibisch, R. Vásquez & E. Gross, Revista Soc. Boliv. Bot. 2(2): 118-119. 1999. Bolivia: Cochabamba. [HT: LPB; IT: USZ, FR].
- 3-6.2 **F. vasquezii** E. Gross & Ibisch, J. Bromeliad Soc. 47(5): 212-214. 1997. Bolivia: Santa Cruz. [HT: HEID; IT: LPB].
- 3-9.1 **F. chiquitana** Ibisch, R. Vásquez & E. Gross, Revista Soc. Boliv. Bot. 2(2): 118-122. 1999. Bolivia: Santa Cruz. [HT: LPB; IT: USZ, FR].
- 3-10.1 **F. spectabilis** H. Luther, J. Bromeliad Soc. 47(3): 118-119. 1997. Bolivia: Santa Cruz. [HT: SEL; IT: LPB, WU, NY, HB, US, MO, USZ].
- 3-10.2 **F. latifolia** Ibisch, R. Vásquez & E. Gross, Revista Soc. Boliv. Bot. 2(2): 123-128. 1999. Bolivia: Santa Cruz. [HT: LPB; IT: USZ, FR].

5.1 STEYERBROMELIA L.B. Smith.

- 5.1-2.1 **S. ramosa** (L.B. Smith) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), Flora of the Venezuelan Guayana, Vol. 3: 655. 1997.
BASIONYM: *Navia ramosa* L.B. Smith, Mem. New York Bot. Gard. 14(3): 38. 1967.
SYN.: *Navia platyphylla* L.B. Smith & Steyermark.
- 5.1-4 **S. plowmanii** (L.B. Sm., Steyermark & H. Rob.) B. Holst, Selbyana 22(1): 75. 2001.
BASIONYM: *Navia plowmanii* L.B. Sm., Steyermark & H. Rob., Ann. Missouri Bot. Gard. 73: 703. 1986 [1987].
SYNONYM: *Steyerbromelia neblinae* B. Holst in Berry, P.E., B.K. Holst & K. Yatskievych, Flora of the Venezuelan Guayana 3: 655. 1997, nom. superfl., based on *Navia diffusa* L.B. Sm., Mem. New York Bot. Gard. 10(2): 19, fig. 7. 1960; non *Steyerbromelia diffusa* L.B. Sm., Steyermark & H. Rob. 1986 [1987].
- 5.1-5 **S. thomasii** (L.B. Smith, Steyermark & H. Robinson) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), Flora of the Venezuelan Guayana, Vol. 3: 655. 1997.
BASIONYM: *Navia thomasii* L.B. Smith, Steyermark & H. Robinson, Ann. Missouri Bot. Gard. 73: 703-704. 1986.

6 DEUTEROCOHNIA Mez.

- 6-11.1 **D. bracteosa** W. Till & L. Hromadnik, Bromélia 4(1): 19-22. 1997. Bolivia: Chuquisaca. [HT: WU].

8 PITCAIRNIA L'Héritier. See Robinson and Taylor (1999). Also see Taylor and Robinson (1999).

- 8-0 **P. alexanderi** (H. Luther) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 206. 1999.
BASIONYM: *Pepinia alexanderi* H. Luther, Selbyana 12(1-4): 77, 79. 1991.
= *Pepinia alexanderi* H. Luther.

- 8-0 **P. cristalinensis** (Leme) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 207. 1999.
BASIONYM: *Pepinia cristalinensis* Leme, Selbyana 16(1): 110–111. 1995.
=*Pepinia cristalinensis* Leme.
- 8-0 **P. elvirae** D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 207. 1999.
BASIONYM: *Pepinia verrucosa* E. Gross, Trop. Subtrop. Pflanzenwelt 95: 11, 28–30. 1997.
=*Pepinia verrucosa* E. Gross.
- 8-0 **P. harrylutheri** D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 207. 1999.
BASIONYM: *Pepinia fulgens* H. Luther, Selbyana 12(1–4): 77–78, 80. 1991.
=*Pepinia fulgens* H. Luther.
- 8-0 **P. hooveri** (H. Luther) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 207. 1999.
BASIONYM: *Pepinia hooveri* H. Luther, Selbyana 12(1–4): 78–82. 1991.
=*Pepinia hooveri* H. Luther.
- 8-0 **P. leopoldii** (W. Till & S. Till) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), Flora of the Venezuelan Guayana, Vol. 3: 644. 1997.
BASIONYM: *Pepinia leopoldii* W. Till & S. Till, Bromélia 1(3): 6–8. 1994.
=*Pepinia leopoldii* W. Till & S. Till.
- 8-0 **P. neglecta** (H. Luther) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 208. 1999.
BASIONYM: *Pepinia neglecta* H. Luther, Phytologia 74: 456–458. 1993.
=*Pepinia neglecta* H. Luther.
- 8-0 **P. sanguinea** (H. Luther) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 208. 1999.
BASIONYM: *Pepinia sanguinea* H. Luther, Bromélia 4(3): 6–8. “1997” 1998.
=*Pepinia sanguinea* H. Luther.
- 8-0 **P. tatzyanæ** (H. Luther) D.C. Taylor & H. Robinson, Harvard Pap. Bot. 4(1): 208. 1999.
BASIONYM: *Pepinia tatzyanæ* H. Luther, Bromélia 2(4): 38–40. 1995.
=*Pepinia tatzyanæ* H. Luther.
- 8-45 **P. chiriquensis** L.B. Smith.
See Grant (1999).
- 8-63.2 **P. rundelliana** J.R. Grant, J. Bromeliad Soc. 48(3): 101, 103–105. 1998. Panama: Chiriqui. [HT: US; IT: B, MO, NY, SEL].
- 8-72.1 **P. mirandæ** J. Utley & Burt-Utley, Novon 8: 304–306. 1998. Mexico: Chiapas. [HT: MEXU; IT: CAS, MO, US].
- 8-104.2 **P. koeneniana** E. Gross & Barthlott, Trop. Subtrop. Pflanzenwelt 95: 12–14, 32. 1997. Mexico: Nyarit. [HT: HEID].
- 8-108 **P. feliciana** (A. Chevalier) Harms & Mildbraed.
See Porembski and Barthlott (1999). See also Jacques-Félix (2000).
- 8-122.1 **P. pumila** W. Weber.
Formerly treated as a synonym of *Pitcairnia flammea* Lindley in Luther and Sieff (1994).
=*Pitcairnia corcovadensis* Wawra. See Wendt et al. (2000: 397).
- 8-133.1 **P. corcovadensis** Wawra.
See Wendt et al. (2000). Previously treated as a variety of *Pitcairnia flammea* in Smith and Downs (1974).
SYN.: *Pitcairnia lancifolia* Mez var. *lancifolia*.
SYN.: *Pitcairnia lancifolia* var. *minor* L.B. Smith.
SYN.: *Pitcairnia pumila* W. Weber.
- 8-145.3 **P. longissimiflora** Ibisch, R. Vásquez & E. Gross, J. Bromeliad Soc. 49(3): 126–129. 1999. Bolivia: Santa Cruz. [HT: LPB].
- 8-157a **P. lancifolia** Mez var. **lancifolia**.
Formerly treated as a synonym of *Pitcairnia flammea* Lindley in Luther and Sieff (1994).
=*Pitcairnia corcovadensis* Wawra. See Wendt et al. (2000: 396).

- 8-157b **P. lancifolia** var. **minor** L.B. Smith.
Formerly treated as a synonym of *Pitcairnia flammea* Lindley in Luther and Sieff (1994).
=*Pitcairnia corcovadensis* Wawra. See Wendt et al. (2000: 396).
- 8-160.1 **P. geotropa** J.R. Grant, J. Bromeliad Soc. 48(3): 99–103. 1998. Panama: Chiriqui. [HT: US; IT: SEL].
- 8-201.2 **P. ferrell-ingramiae** H. Luther & Dalström, J. Bromeliad Soc. 47(5): 231–233. 1997. Ecuador: Imbabura. [HT: SEL].
- 8-222.4 **P. amboroensis** Ibisch, R. Vásquez, E. Gross & Kessler, J. Bromeliad Soc. 49(3): 126, 129–132. 1999. Bolivia: Santa Cruz. [HT: LPB].
- 8-222.5 **P. heydlauffii** R. Vásquez & Ibisch, Bromelie 1/2000: 14–16. 2000. Bolivia: Cochabamba. [HT: LPB].
- 8-234.1a **P. roseoalba** E. Gross & Rauh var. **roseoalba**, Trop. Subtrop. Pflanzenwelt 95: 14–16, 35. 1997. Peru: La Libertad. [HT: HEID].
- 8-234.1b **P. roseoalba** var. **rubra** E. Gross & Rauh, Trop. Subtrop. Pflanzenwelt 95: 16, 34. 1997. Peru: La Libertad. [HT: HEID].
- 8-243.1 **P. kroemeri** H. Luther, Selbyana 21(1,2): 125. 2000. Bolivia: Beni. [HT: LPB; IT: GOET, SEL].

8.1 PEPINIA Brongniart ex André. See Taylor and Robinson (1999).

- 8.1-19.1 **P. cristalinensis** Leme.
SYN.: *Pitcairnia cristalinensis* (Leme) D.C. Taylor & H. Robinson.
- 8.1-24.3 **P. leopoldii** W. Till & S. Till.
SYN.: *Pitcairnia leopoldii* (W. Till & S. Till) B. Holst.
- 8.1-25.2 **P. fulgens** H. Luther.
SYN.: *Pitcairnia harrylutheri* D.C. Taylor & H. Robinson.
- 8.1-25.3 **P. verrucosa** E. Gross, Trop. Subtrop. Pflanzenwelt 95: 11, 28–30. 1997. Ecuador: Napo. [HT: HEID].
SYN.: *Pitcairnia elvirae* D.C. Taylor & H. Robinson.
- 8.1-33.2 **P. tatzyanae** H. Luther.
SYN.: *Pitcairnia tatzyanae* (H. Luther) D.C. Taylor & H. Robinson.
- 8.1-35.1 **P. alexanderi** H. Luther.
SYN.: *Pitcairnia alexanderi* (H. Luther) D.C. Taylor & H. Robinson.
- 8.1-35.2 **P. neglecta** H. Luther.
SYN.: *Pitcairnia neglecta* (H. Luther) D.C. Taylor & H. Robinson.
- 8.1-35.3 **P. sanguinea** H. Luther, Bromelia 4(3): 6–8. “1997” 1998. Colombia: Vaupes. [HT: SEL; IT: US, MO, HUA].
SYN.: *Pitcairnia sanguinea* (H. Luther) D.C. Taylor & H. Robinson.
- 8.1-35.5 **P. minicorallina** H. Luther, Selbyana 21(1,2): 130–131. 2000. Peru: Amazonas. [HT: MO].
- 8.1-37.1 **P. hooveri** H. Luther.
SYN.: *Pitcairnia hooveri* (H. Luther) D.C. Taylor & H. Robinson.

9 BROCCINIA Schultes f.

- 9-5.1 **B. oliva-estevae** Steyermark & L.B. Smith.
=*Broccinia tatei* L.B. Smith. See Holst (1994: 138).
- 9-6 **B. bernardii** L.B. Smith.
=*Broccinia melanacra* L.B. Smith. See Holst (1994: 138).
- 9-7.2 **B. wurdackiana** B. Holst, BioLlania Ed. Esp. 6: 395–396, 380. 1997. Venezuela: Amazonas. [HT: VEN; IT: US].
- 9-10 **B. melanacra** L.B. Smith.
See Holst (1997b: 378).
SYN.: *Broccinia bernardii* L.B. Smith.
- 9-10.1 **B. rupestris** (Gleason) B. Holst, BioLlania Ed. Esp. 377. 1997.
BASIONYM: *Tofieldia rupestris* Gleason, Bull. Torrey Bot. Club 56: 18. 1929.
SYN.: *Navia rupestris* (Gleason) Sandwith.

- 9-10.2 **B. cataractarum** (Sandwith) B. Holst, *BioLlania* Ed. Esp. 6: 377. 1997.
BASIONYM: *Navia cataractarum* Sandwith, Kew Bull. 14: 476. 1960.
- 9-13 **B. cryptantha** L.B. Smith.
=*Brocchinia hechtioides* Mez. See Holst (1994: 138).
- 9-14 **B. paniculata** Schultes f.
See Holst (1997b: 378).
- 9-15 **B. tatei** L.B. Smith.
SYN.: *Brocchinia oliva-estevae* Steyermark & L.B. Smith.
SYN.: *Brocchinia secunda* L.B. Smith.
- 9-16 **B. secunda** L.B. Smith.
=*Brocchinia tatei* L.B. Smith. See Holst (1994: 138).
- 9-18 **B. hechtioides** Mez.
See Holst (1997b: 378).
SYN.: *Brocchinia cryptantha* L.B. Smith.

10 AYENSUA L.B. Smith.

- 10-1 **A. uaipanensis** (Maguire) L.B. Smith.
See Horres and Schneider (1996).

11 NAVIA Martius.

- 11-2 **N. rupestris** (Gleason) Sandwith.
=*Brocchinia rupestris* (Gleason) B. Holst. See Holst (1997b: 377).
- 11-3 **N. cataractarum** Sandwith.
=*Brocchinia cataractarum* (Sandwith) B. Holst. See Holst (1997b: 377).
- 11-3.1 **N. plowmanii** L.B. Smith, Steyermark & H. Robinson.
=*Steyerbromelia neblinae* B. Holst. See Holst (1997a: 655).
- 11-4 **N. hohenbergioides** L.B. Smith.
=*Brewcaria hohenbergioides* (L.B. Smith) B. Holst. See Holst (1997a: 571).
- 11-7 **N. brocchinioides** L.B. Smith.
=*Brewcaria brocchinioides* (L.B. Smith) B. Holst. See Holst (1997a: 569).
- 11-8 **N. diffusa** L.B. Smith.
=*Steyerbromelia neblinae* B. Holst. See Holst (1997a: 655).
- 11-8.1 **N. thomasi** L.B. Smith, Steyermark & Robinson.
=*Steyerbromelia thomasi* (L.B. Smith, Steyermark & H. Robinson) B. Holst. See Holst (1997a: 655).
- 11-8.2 **N. platyphylla** L.B. Smith & Steyermark.
=*Steyerbromelia ramosa* (L.B. Smith) B. Holst. See Holst (1997a: 655).
- 11-9 **N. hechtioides** L.B. Smith.
=*Brewcaria hechtioides* (L.B. Smith) B. Holst. See Holst (1997a: 571).
- 11-10 **N. reflexa** L.B. Smith.
=*Brewcaria reflexa* (L.B. Smith) B. Holst. See Holst (1997a: 571).
- 11-11 **N. ramosa** L.B. Smith.
=*Steyerbromelia ramosa* (L.B. Smith) B. Holst. See Holst (1997a: 655).

11.1 BREWCARIA L.B. Smith.

- 11.1-3 **B. hechtioides** (L.B. Smith) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), *Flora of the Venezuelan Guayana*, Vol. 3: 571. 1997.
BASIONYM: *Navia hechtioides* L.B. Smith.
- 11.1-4 **B. hohenbergioides** (L.B. Smith) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), *Flora of the Venezuelan Guayana*, Vol. 3: 571. 1997.
BASIONYM: *Navia hohenbergioides* L.B. Smith.
- 11.1-5 **B. reflexa** (L.B. Smith) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), *Flora of the Venezuelan Guayana*, Vol. 3: 571. 1997.
BASIONYM: *Navia reflexa* L.B. Smith.

- 11.1-6 **B. brocchinioides** (L.B. Smith) B. Holst, in Berry, P.E., B.K. Holst & K. Yatskievych (eds.), *Flora of the Venezuelan Guayana*, Vol. 3: 571. 1997.
BASIONYM: *Navia brocchinioides* L.B. Smith.

12 DYCKIA Schultes f.

- 12-2.2 **D. retardata** Winkler, Doc. Naturae 3: 42–43. 1982. Brazil: Rio Grande do Sul. [HT: ULM; IT: ICN].
- 12-17.1 **D. retroflexa** Winkler, Doc. Naturae 3: 44–45. 1982. Brazil: Rio Grande do Sul. [HT: ULM; IT: HPA].
- 12-24 **D. duarteana** L.B. Smith.
= *Dyckia sordida* Baker. See Forzza and Wanderley (1998: 260–262).
- 12-36.1 **D. ibicuiensis** T. Strehl, *Bromélia* 4(4): 14–16. “1997” 1998. Brazil: Rio Grande do Sul. [HT: HAS].
- 12-43.1 **D. alba** Winkler, Doc. Naturae 3: 33–34. 1982. Brazil: Rio Grande do Sul. [HT: ULM; IT: ICN].
- 12-43.2 **D. elisabethae** Winkler, Doc. Naturae 3: 36–7. 1982. Brazil: Rio Grande do Sul. [HT: ULM; IT: ICN].
- 12-48.2 **D. hohenbergioides** Leme & Esteves, *J. Bromeliad Soc.* 48(3): 124–126. 1998. Brazil: Bahia. [HT: HB; IT: RB].
- 12-61 **D. sordida** Baker.
SYN.: *Dyckia duarteana* L.B. Smith.
- 12-63a **D. oligantha** L.B. Smith var. **oligantha**.
= *Dyckia saxatilis* Mez. See Forzza and Wanderley (1998: 258–260).
- 12-63b **D. oligantha** var. **crystallina** Rauh.
= *Dyckia saxatilis* Mez. See Forzza and Wanderley (1998: 258–260).
- 12-67 **D. heloisae** L.B. Smith.
= *Encholirium heloisae* (L.B. Smith) Forzza & Wanderley. See Forzza and Wanderley (1998: 264–266).
- 12-68.1 **D. milagrensis** Leme, *Harvard Pap. Bot.* 4(1): 164–166. 1999. Brazil: Bahia. [HT: HB].
- 12-70 **D. hilaireana** Mez.
= *Dyckia saxatilis* Mez. See Forzza and Wanderley (1998: 258–260).
- 12-80.1 **D. tenebrosa** Leme & H. Luther, *Selbyana* 19(2): 183–184. “1998” 1999. Brazil: Minas Gerais. [HT: HB].
- 12-85 **D. saxatilis** Mez.
SYN.: *Dyckia hilaireana* Mez.
SYN.: *Dyckia oligantha* L.B. Smith var. *oligantha*.
SYN.: *Dyckia oligantha* var. *crystallina* Rauh.

13 HECHTIA Klotsch.

- 13-1.1 **H. gayorum** L.W. Lenz.
Originally published as *Hechtia gayi* (named for Mr. & Mrs. Ed Gay).
- 13-10 **H. montana** Brandegees.
See Felger and Yetman (2000).
- 13-29 **H. schottii** Baker ex Hemsley.
See Ramírez et al. (2000).

14 TILLANDSIA Linnaeus. See Shimizu and Takizawa (1998).

- 14-0 **T. xbergiana** H. Takizawa & P. Koide, *J. Bromeliad Soc.* 50(6): 244–246. 2000. Mexico: Chiapas. [HT: SEL; IT: MEXU].
- 14-0 **T. blokii** Hemsley.
Formerly treated as a synonym of *Vriesea regina* (Vellozo) Beer in Smith and Downs (1977).
= *Alcantarea imperialis* (Carrière) Harms. See Leme (“1997”).
- 14-0 **T. boryana** Gandoger.
= *Tillandsia fasciculata* var. *venosispica* Mez. See Till (1999).

- 14-0 **T. ×correalei** H. Luther, Selbyana 7(1): 92. 1982. Honduras: Francisco Morazon. [HT: SEL].
- 14-0 **T. jaguactalensis** I. Ramírez, Carnevali & Chi, J. Bromeliad Soc. 50(2): 62–67. 2000. Mexico: Quintana Roo. [HT: CICY].
Natural hybrid.
- 14-0 **T. ×marceloi** H. Takizawa & P. Koide, J. Bromeliad Soc. 49(5): 213–215. 1999. Mexico: Oaxaca. [HT: SEL].
- 14-0 **T. may-patii** I. Ramírez & Carnevali, Harvard Pap. Bot. 4(1): 187–190. 1999. Mexico: Quintana Roo. [HT: CICY].
Natural hybrid.
- 14-0 **T. nidus** Rauh & Lehmann.
Formerly 246.1 in Luther and Sieff (1994). Natural hybrid.
- 14-0 **T. portillae** E. Gross & Wülfinghoff, J. Bromeliad Soc. 47(2): 52–53, cover. 1997. Ecuador: Loja. [HT: HEID].
Vriesea s.l.
- 14-0 **T. pulvinata** E. Morren ex Baker.
Formerly treated as a synonym of *Tillandsia dasyliriifolia* Baker in Smith and Downs (1977).
=*Tillandsia drepanoclada* Baker. See Espejo Serna and López-Ferrari (1994: 29).
- 14-0 **T. retrorsa** A. Silveira.
Formerly treated as a synonym of *Tillandsia streptocarpa* Baker in Smith and Downs (1977).
=*Tillandsia arhiza* Mez.
- 14-0 **T. wilsonii** S. Watson.
Formerly treated as a synonym of *Tillandsia fasciculata* var. *densispica* Mez in Smith and Downs (1977).
=*Tillandsia utriculata* Linnaeus ssp. *utriculata* forma *utriculata*.
- 14-4.1 **T. kessleri** H. Luther, Selbyana 20(1): 10–11. 1999. Bolivia: Cochabamba. [HT: SEL; IT: LPB].
- 14-19 **T. somnians** L.B. Smith.
See Zizka and Horres (1996).
- 14-29 **T. deppeana** Steudel.
See Till (1999).
- 14-37.2 **T. samaipatensis** W. Till, Bromelie 2/1996: 36–38. 1996. Bolivia: Santa Cruz. [HT: LPB; IT: SEL, WU].
- 14-39 **T. guatemalensis** L.B. Smith.
See Guess and Guess (1998b).
- 14-65 **T. buseri** Mez.
SYN.: *Tillandsia buseri* var. *nubicola* Gilmartin.
- 14-65b **T. buseri** var. *nubicola* Gilmartin.
=*Tillandsia buseri* Mez.
- 14-115.2 **T. bakiorum** H. Luther, Selbyana 20(1): 13–14. 1999. Colombia: Cundinamarca. [HT: SEL; IT: COL].
- 14-119 **T. marantoidea** Rusby.
=*Guzmania marantoidea* (Rusby) H. Luther. See Luther (1998b: 86).
- 14-124b **T. sphaerocephala** var. *tarijensis* Ehlers & L. Hromadnik, Bromelie 2/1998: 37, 41. 1998. Bolivia: Tarija. [HT: LPB; IT: WU].
- 14-124.1 **T. calochlamys** Ehlers & L. Hromadnik, Bromelie 2/1998: 37–39. 1998. Bolivia: Cochabamba. [HT: LPB; IT: WU].
- 14-124.2 **T. imporaensis** Ehlers, Bromelie 3/1998: 76–79. 1999. Bolivia: Chuquisaca. [HT: WU].
- 14-127 **T. engleriana** Wittmack.
SYN.: *Vriesea appendiculata* (L.B. Smith) L.B. Smith.
- 14-141 **T. insignis** (Mez) L.B. Smith & Pittendrigh.
See Grant (1997a).
- 14-149 **T. gardneri** Lindley.
See Ehlers (“1996”: 17–19).
- 14-149.1 **T. chapeuensis** Rauh.
See Ehlers (“1996”: 20–22).

- 14-150.4 **T. barrosoae** W. Till, Bromélia 5(1-4): 39-42. "1998" 1999. Brazil: Goiás. [HT: HB; IT: HB].
- 14-151.5 **T. ramellae** W. Till & S. Till.
See Till and Till (1997).
- 14-152 **T. sucrei** E. Pereira.
See Ehlers ("1996": 29-31).
- 14-154 **T. globosa** Wawra.
See Ehlers ("1996": 12-14).
- 14-155 **T. geminiflora** Brongniart.
See Ehlers ("1996": 15-16).
- 14-155.1 **T. grazielae** Sucre & Braga.
See Ehlers ("1996": 23-25).
- 14-155.2 **T. reclinata** E. Pereira & Martinelli.
See Ehlers ("1996": 26-28).
- 14-156 **T. brachyphylla** Baker.
See Ehlers ("1996": 32-34).
- 14-163.2 **T. colganii** Ehlers, J. Bromeliad Soc. 47(3): 103-106. 1997. Bolivia: Santa Cruz. [HT: WU].
- 14-164.5 **T. hasei** Ehlers & L. Hromadnik, Bromelie 3/1996: 76-78. 1997. Bolivia: Chuquisaca. [HT: WU].
- 14-164.6 **T. erici** Ehlers, Bromelie 1/1998: 18-21. 1998. Bolivia: Tarija. [HT: WU].
- 14-171 **T. sprengeliana** Klotzsch ex Mez.
See Ehlers ("1996": 42-44).
- 14-171.1 **T. kautskyi** E. Pereira.
See Ehlers ("1996": 45-47).
- 14-171.2 **T. thickenii** Ehlers.
See Ehlers ("1996": 39-41).
- 14-171.3 **T. heubergeri** Ehlers, Bromelie—Sonderheft 3: 35-38. "1996" 1997. Brazil: Bahia. [HT: HB; IT: WU].
- 14-171.4 **T. roseiflora** Ehlers & W. Weber, Bromelie—Sonderheft 3: 52-57. "1996" 1997. Brazil: Rio de Janeiro. [HT: HB; IT: WU].
- 14-171.5 **T. organensis** Ehlers, Bromelie—Sonderheft 3: 48-51. "1996" 1997. Brazil: Rio de Janeiro. [HT: HB; IT: WU].
- 14-178g **T. tenuifolia** var. **strobiliformis** Ehlers, Bromelie 2/1996: 41-43. 1996. Brazil: Espírito Santo. [HT: WU].
Indexed and illustrated as *Tillandsia tenuifolia* var. *strobilacea* in Bromelie 2/1996.
- 14-180b **T. aeranthos** var. **alba** T. Strehl & G. Rohde, Bromélia 5(1-4): 76-77. "1998" 1999. Brazil: Rio Grande do Sul. [HT: HAS].
- 14-180.1 **T. polzii** Ehlers, Bromelie 1/1997: 11-16. 1997. Brazil: Rio Grande do Sul. [HT: HB; IT: WU].
- 14-187b **T. laxissima** var. **moorei** H. Luther, Selbyana 20(1): 13. 1999. Peru: San Martín. [HT: SEL].
- 14-201.1 **T. kurt-horstii** Rauh.
=*Tillandsia graomogolensis* A. Silveira. See Till ("1998": 42).
- 14-201.3 **T. graomogolensis** A. Silveira.
SYN.: *Tillandsia kurt-horstii* Rauh.
- 14-204 **T. arhiza** Mez.
SYN.: *Tillandsia retrorsa* A. Silveira.
- 14-244 **T. imperialis** E. Morren ex Roezl.
See Chazaro and Mostul (1997).
- 14-246 **T. ionantha** Planchon.
See Ehlers (2000b). See also Ehlers (2000a).
- 14-246f **T. ionantha** var. **maxima** Ehlers, Bromelie 1/2000: 7-9. 2000. Mexico: Oaxaca. [HT: MEXU; IT: WU].
- 14-246.3 **T. kolbii** W. Till & Schatzl.
See Ehlers (2000a).
SYN.: *Tillandsia scaposa* (L.B. Smith) Ehlers.
- 14-246.4 **T. delicata** Ehlers, Bromelie 3/1999: 64-66. 2000. Mexico: Oaxaca. [HT: MEXU; IT: WU].

- 14-246.5 **T. scaposa** (L.B. Smith) Ehlers, Bromelie 1/2000: 27. 2000.
See Ehlers (2000a).
BASIONYM: *Tillandsia ionantha* var. *scaposa* L.B. Smith, Lilloa 6: 384. 1941.
=*Tillandsia kolbii* W. Till & Schatzl.
- 14-249.3 **T. borinquensis** Cedeño-Maldonado & Proctor, Harvard Pap. Bot. 4(1): 113–115. 1999. Puerto Rico: Yauco. [HT: MAPR; IT: UPR, UPRRP].
- 14-253 **T. carlsoniae** L.B. Smith.
See Guess and Guess (1998a).
- 14-257.1 **T. juerg-rutschmannii** Rauh.
See Guess and Guess (2000b).
- 14-271 **T. lineatispica** Mez.
See Haugg (2000).
- 14-277.6 **T. nuyooensis** Ehlers.
Formerly 342.2 in Luther and Sieff (1994).
- 14-277.7 **T. takizawae** Ehlers & H. Luther, J. Bromeliad Soc. 50(5): 216–221. 2000. Mexico: Puebla. [HT: MEXU; IT: SEL, WU].
- 14-282d **T. fasciculata** var. **venosispica** Mez.
SYN.: *Tillandsia boryana* Gandoger.
- 14-282.9 **T. kuzmae** Ehlers, J. Bromeliad Soc. 50(3): 113–116. 2000. Dominican Republic: Espaillat. [HT: JBSD].
- 14-285.4 **T. mixtecorum** Ehlers & Koide, J. Bromeliad Soc. 48(2): 52–54, cover. 1998. Mexico: Oaxaca. [HT: MEXU; IT: WU].
- 14-285.5 **T. moronesensis** Ehlers, J. Bromeliad Soc. 50(3): 117–121. 2000. Mexico: Zacatecas. [HT: WU; IT: WU].
- 14-285.6 **T. ulrici** Ehlers, Bromelie 3/2000: 64–68. 2000. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].
- 14-297 **T. cretacea** L.B. Smith.
See Luther (1999b).
- 14-297.3 **T. atrovioleacea** Ehlers & Koide, J. Bromeliad Soc. 47(1): 21–23. 1997. Mexico: Oaxaca. [HT: MEXU].
- 14-304.2 **T. simplex** Matuda.
Formerly treated as a synonym of *Tillandsia dasyliiriifolia* Baker in Smith and Downs (1977).
=*Tillandsia drepanoclada* Baker. See Espejo Serna and López-Ferrari (1994: 29).
- 14-304.3 **T. drepanoclada** Baker.
Formerly treated as a synonym of *Tillandsia dasyliiriifolia* Baker in Smith and Downs (1977). See Espejo Serna and López-Ferrari (1994: 29).
SYN.: *Tillandsia pulvinata* E. Morren ex Baker.
SYN.: *Tillandsia simplex* Matuda.
- 14-306ai **T. utriculata** Linnaeus ssp. **utriculata** forma **utriculata**.
SYN.: *Tillandsia wilsonii* S. Watson.
- 14-311 **T. flexuosa** Swartz.
See Hase (2000).
- 14-321 **T. paraensis** Mez.
See Ehlers (“1996”: 10–11).
- 14-327.1(2) **T. pseudobaileyi** ssp. **yucatanensis** I. Ramírez, Carnevali & Olmsted, J. Bromeliad Soc. 50(2): 68–72. 2000. Mexico: Campeche. [HT: CICY; IT: MEXU, MO, SEL].
- 14-327.3 **T. lydiae** Ehlers, Bromelie 2/2000: 55–59. 2000. Mexico: Guerrero. [HT: MEXU; IT: WU].
- 14-340.4 **T. trigalensis** Ehlers, Bromelie 2–3/1997: 44–48, cover. 1997. Guatemala: Quiché. [HT: WU].

14.1 RACINAEA M.A. Spencer & L.B. Smith.

- 14.1-22.1 **R. kessleri** H. Luther, Selbyana 19(1): 86–87. 1998. Bolivia: Cochabamba. [HT: SEL; IT: LPB].

15 VRIESEA Lindley.

- 15-0 **V. blokii** Hort.
= *Alcantarea imperialis* (Carrière) Harms. See Leme ("1997").
- 15-0 **V. minarum** L.B. Smith.
Formerly treated as a synonym of *Vriesea atropurpurea* A. Silveira in Smith and Downs (1977).
= *Vriesea citrina* (Baker) L.B. Smith. See Leme (1999: 7–11).
- 15-0 **V. ×morreniana** Hort. ex E. Morren.
See Costa ("1997").
- 15-0 **V. simulans** J.F. Morales. Novon 9: 404–405. 1999. Costa Rica: Alajuela. [HT: INB; IT: MO, SEL].
Nom. illeg., not *Vriesea simulans* Leme, 1997.
- 15-20.3 **V. fabioi** Leme, Harvard Pap. Bot. 4(1): 153–154. 1999. Brazil: Bahia. [HT: HB].
- 15-33 **V. stricta** L.B. Smith.
See Leme (1997c: 175–177).
- 15-33.1 **V. citrina** (Baker) L.B. Smith.
Formerly treated as a synonym of *Vriesea atropurpurea* A. Silveira in Smith and Downs (1977). See Leme (1999: 7–11).
SYN.: *Vriesea minarum* L.B. Smith.
- 15-41.1 **V. barii** J.F. Morales, Novon 9: 401–402. 1999. Costa Rica: Cartago. [HT: INB].
- 15-47.1 **V. vulcanicola** J.F. Morales, Novon 9: 405–406. 1999. Costa Rica: Guanacaste. [HT: INB; IT: MO].
- 15-51 **V. macrostachya** (Bello) Mez.
See Grant (1997c).
- 15-53.1 **V. grandiflora** Leme, J. Bromeliad Soc. 50(2): 52–54. 2000. Brazil: Rio de Janeiro. [HT: HB].
- 15-54.1 **V. pseudoatra** Leme, Harvard Pap. Bot. 4(1): 162–163. 1999. Brazil: Rio de Janeiro. [HT: HB].
- 15-54.2 **V. chapadensis** Leme, Harvard Pap. Bot. 4(1): 157–159. 1999. Brazil: Bahia. [HT: HB].
- 15-57.2 **V. rafaelii** Leme, Harvard Pap. Bot. 4(1): 163–164. 1999. Brazil: Minas Gerais. [HT: HB].
- 15-59.2 **V. oleosa** Leme, Harvard Pap. Bot. 4(1): 160–161. 1999. Brazil: Bahia. [HT: HB].
- 15-59.3 **V. exaltata** Leme, Harvard Pap. Bot. 4(1): 159–160. 1999. Brazil: Bahia. [HT: HB].
- 15-89.1 **V. diamantinensis** Leme, J. Bromeliad Soc. 47(4): 168–170, 176, back cover. 1997. Brazil: Minas Gerais. [HT: HB].
- 15-89.2 **V. simulans** Leme, J. Bromeliad Soc. 47(4): 168–172, 176. 1997. Brazil: Minas Gerais. [HT: HB; IT: SEL].
- 15-89.3 **V. nanuzae** Leme, J. Bromeliad Soc. 47(4): 171–174, 176. 1997. Brazil: Minas Gerais. [HT: HB].
- 15-89.4 **V. atropurpurea** Silveira.
Formerly 209 in Smith and Downs (1977). See Leme (1999: 3–7).
- 15-97.1 **V. haberi** J.F. Morales, Novon 9: 402–403. 1999. Costa Rica: Guanacaste. [HT: INB].
- 15-98.1 **V. tiquirensis** J.F. Morales, Novon 9: 405. 1999. Costa Rica: San Jose. [HT: INB; IT: SEL].
- 15-106.2 **V. osaensis** J.F. Morales, Novon 9: 403–404. 1999. Costa Rica: Puntarenas. [HT: INB].
- 15-161 **V. appendiculata** (L.B. Smith) L.B. Smith.
= *Tillandsia engleriana* Wittmack. See Luther (1999d: 13, 15).
- 15-162.2 **V. tillii** Manzanares, J. Bromeliad Soc. 48(4): 169–171. 1998. Ecuador: Sucumbios. [HT: QCNE].
- 15-180.2 **V. garlippiana** Leme, J. Bromeliad Soc. 47(3): 99–102. 1997. Brazil: Rio de Janeiro. [HT: HB].
- 15-184.2 **V. fidelensis** Leme, Bradea 8(21): 118–119, 121. 1999. Brazil: Rio de Janeiro. [HT: HB; IT: SEL].
- 15-186.1 **V. calimaniiana** Leme & W. Till, Bromélia 4(2): 7–12. 1997. Brazil: Espírito Santo. [HT: HB].
- 15-188.3 **V. repandostachys** Leme, Harvard Pap. Bot. 4(1): 151–153. 1999. Brazil: Espírito Santo. [HT: HB].

- 15-190.1 **V. noblickii** Martinelli & Leme.
SYN.: *Vriesea sandrae* Leme.
- 15-200.5 **V. sandrae** Leme.
=*Vriesea noblickii* Martinelli & Leme. E.M.C. Leme (pers. comm., Feb. 2000).
- 15-203.1 **V. bleherae** Röth & W. Weber.
Published as *Vriesea bleheri* (named for Frau Amanda Bleher).
- 15-205.1 **V. jonesiana** Leme, Harvard Pap. Bot. 4(1): 154–156. 1999. Brazil: São Paulo. [HT: HB].
- 15-211.1 **V. capixabae** Leme, Harvard Pap. Bot. 4(1): 150–151. 1999. Brazil: Espírito Santo. [HT: HB; IT: RB, SEL].
- 15-217.1 **V. mollis** Leme, Harvard Pap. Bot. 4(1): 156–157. 1999. Brazil: Rio de Janeiro. [HT: HB].
- 15-224.1 **V. gruberi** Ehlers, Bromelie 1/1999: 10–13. 1999. Colombia: Tolima. [HT: COL].
- 15-228.2 **V. hasei** Ehlers, Bromelie 2/1998: 55–58. 1998. Venezuela: Portuguesa. [HT: VEN; IT: WU].
See Oliva-Esteve and Manara (1999).
- 15-229.2 **V. lutheri** J. Manzanares & W. Till, J. Bromeliad Soc. 50(4): 169–172. 2000. Ecuador: Zamora-Chinchi. [HT: QCNE].

15.1 ALCANTAREA (E. Morren ex Mez) Harms.

- 15.1-2 **A. geniculata** (Wawra) J.R. Grant.
See Leme (1997c: 29–34).
- 15.1-2.1 **A. glaziouana** (Lemaire) Leme, Bromélia 4(2): 35–40. 1997.
BASIONYM: *Vriesea glaziouana* Lemaire, Ill. Hort. 14 (Misc.): 43. 1857.
- 15.1-10 **A. imperialis** (Carrière) Harms.
SYN.: *Tillandsia blokii* Hemsley.
SYN.: *Vriesea blokii* Hort.
- 15.1-16 **A. roberto-kautskyi** Leme, Harvard Pap. Bot. 4(1): 148–150. 1999. Brazil: Espírito Santo. [HT: HB].

15.2 WERAUHIA J.R. Grant.

- 15.2-3.1 **W. boliviana** H. Luther, Selbyana 19(2): 218–220. “1998” 1999. Bolivia: La Paz. [HT: SEL; IT: LPB].
- 15.2-42.1 **W. lutheri** S. Pierce & J.E. Aranda, J. Bromeliad Soc. 50(5): 206–212. 2000. Panama: Panama. [HT: SCZ; IT: SEL].
- 15.2-47.1 **W. proctorii** Cedeño-Maldonado, Harvard Pap. Bot. 4(1): 115–117. 1999. Puerto Rico: Nagaubo. [HT: US; IT: JBSD, IJ, NY, SJ].
- 15.2-51.1 **W. millenia** J.R. Grant, J. Bromeliad Soc. 50(1): 3–9. 2000. Panama: Coclé. [HT: US; IT: SEL].

16 GUZMANIA Ruiz & Pavón. See Betancur and Miranda-Esquivel (1999).

- 16-8.1 **G. laeta** H. Luther, Selbyana 21(1,2): 126–127. 2000. Colombia: Antioquia. [HT: HUA; IT: COL, MO, NY, US].
- 16-11.2 **G. betancurii** H. Luther, Selbyana 20(1): 10–13. 1999. Colombia: Antioquia. [HT: US; IT: HUA, COL, MO, NY].
- 16-15.2 **G. sieffiana** H. Luther, J. Bromeliad Soc. 48(5): 200–201, 212. 1998. Ecuador: Esmeraldas. [HT: SEL; IT: QCA, QCNE].
- 16-17.2 **G. manzanaresiorum** H. Luther, Selbyana 21(1,2): 127–129. 2000. Ecuador: Pas-taza. [HT: QCNE; IT: MO].
- 16-31.3 **G. darienensis** H. Luther, Selbyana 19(1): 89–90. 1998. Panama: Darién. [HT: MO].
- 16-36.3 **G. viridiflora** E. Gross, Trop. Subtrop. Pflanzenwelt 95: 21–23, 40. 1997. Peru: Amazonas. [HT: HEID].
- 16-39.4 **G. alliodora** E. Gross, Trop. Subtrop. Pflanzenwelt 95: 18–20, 38. 1997. Peru: Pasco. [HT: HEID].
- 16-42b **G. calamifolia** var. **rosacea** J.R. Grant, J. Bromeliad Soc. 48(6): 265–266. 1998. Panama: Coclé. [HT: US; IT: MO, NY, SEL].

- 16-51.2a **G. rio-nievensis** Rauh var. **rio-nievensis**.
= *Guzmania marantoidea* (Rusby) H. Luther. See Luther (1998b: 86).
- 16-51.2b **G. rio-nievensis** var. **laxiflora** Rauh.
= *Guzmania marantoidea* (Rusby) H. Luther. See Luther (1998b: 86).
- 16-51.5 **G. marantoidea** (Rusby) H. Luther, Selbyana 19(1): 86. 1998.
BASIONYM: *Tillandsia marantoidea* Rusby, Desc. So. Amer. Pl. 4. 1920.
SYN.: *Guzmania rio-nievensis* Rauh var. *rio-nievensis*.
SYN.: *Guzmania rio-nievensis* var. *laxiflora* Rauh.
- 16-52.1 **G. formosa** H. Luther, Selbyana 21(1,2): 125–126. 2000. Colombia: Antioquia. [HT: HUA; IT: COL, JAUM, MO, NY, QCA, TULV, US].
- 16-71.1 **G. izkoi** J. Manzanares & W. Till, J. Bromeliad Soc. 50(1): 17–19. 2000 Ecuador: Napo. [HT: QCNE; IT: SEL, WU, QCA].
- 16-75.1 **G. claviformis** H. Luther.
See Gouda (2000b).
- 16-80.4 **G. remediosensis** E. Gross, Trop. Subtrop. Pflanzenwelt 95: 20–21, 39. 1997. Bolivia: La Paz. [HT: HEID].
- 16-81.3 **G. breviscapa** H. Luther, Selbyana 19(2): 220–222. “1998” 1999. Colombia: Chocó. [HT: COL; IT: SEL].
- 16-105ii **G. squarrosa** forma **lutea** Oliva-Esteve, J. Bromeliad Soc. 50(6): 248–249. 2000. Venezuela: Aragua. [HT: VEN; IT: WU].
- 16-105.1 **G. circinnata** Rauh.
See Grant (1998: 265–269).

18 CATOPSIS Grisebach. See Palací (1997).

21 RONNBERGIA E. Morren & André.

- 21-6.3 **R. neoregeloides** Leme, J. Bromeliad Soc. 49(3): 102–105. 1999. Brazil: Bahia. [HT: HB].

22 ARAEOCOCCUS Brongniart.

- 22-5.2 **A. montanus** Leme, Harvard Pap. Bot. 4(1): 142–144. 1999. Brazil: Bahia. [HT: HB].

25 OCHAGAVIA R. Philippi. See Zizka et al. (1999: 328–330).

- 25-0 **O. species 1**.
SYN.: *Fascicularia litoralis* (Philippi) Mez.
- 25-0 **O. species 2**.
SYN.: *Fascicularia pitcairniifolia* (Berlin Hort. ex Verlot) Mez.

26 NEOREGELIA L.B. Smith. See Leme (2000: 230–237). Numbers above 100 are those taxa impossible to incorporate in the FNM 14 sequence.

- 26-1 **N. aculeatosepala** Rauh & Barthlott.
= *Aechmea aculeatosepala* (Rauh & Barthlott) Leme. See Leme (1997a: 95).
- 26-13.1 **N. marceloi** E. Pereira & Moutinho.
= *Canistropsis marceloi* (E. Pereira & Moutinho) Leme. See Leme (1998: 24–26).
- 26-21.2 **N. nevaresii** Leme & H. Luther, J. Bromeliad Soc. 48(4): 152, 155–157. 1998. Brazil: Rio de Janeiro. [HT: HB; IT: SEL].
- 26-28 **N. hatschbachii** L.B. Smith.
= *Neoregelia bahiana* (Ule) L.B. Smith. See Leme (1998: 86–89).
- 26-31 **N. pabstiana** E. Pereira.
= *Neoregelia bahiana* (Ule) L.B. Smith. See Leme (1998: 86–89).
- 26-33 **N. diamantinensis** E. Pereira.
= *Neoregelia bahiana* (Ule) L.B. Smith. See Leme (1998: 86–89, 134–135, 140).
- 26-47.2 **N. carinata** Leme, Harvard Pap. Bot. 4(1): 138–140. 1999. Brazil: Rio de Janeiro. [HT: HB].

- 26-48 **N. albiflora** L.B. Smith.
= *Canistropsis albiflora* (L.B. Smith) H. Luther & Leme. See Leme (1998: 31–33).
- 26-52 **N. johannis** (Carrière) L.B. Smith.
See Luther (1998a).
- 26-54.1 **N. cathcartii** C.F. Reed & R.W. Read.
See Luther (1999a).
- 26-61.1 **N. odorata** Leme, Harvard Pap. Bot. 4(1): 140–141. 1999. Brazil: São Paulo. [HT: HB].
- 26-100 **N. longisepala** E. Pereira & I.A. Penna.
See Leme (1998: 98–99, 136, 140).
- 26-101 **N. leucophoea** (Baker) L.B. Smith.
Formerly 65 in Smith and Downs (1979). See Leme (1998: 64, 138).
SYN.: *Wittrockia leucophoea* (Baker) Leme.
- 26-102 **N. ibitipocensis** (Leme) Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 67–68, 138. 1998.
BASIONYM: *Wittrockia ibitipocensis* Leme, *Bradea* 5(42): 393–394, 396. 1991.
- 26-103 **N. rubrovittata** Leme.
See Leme (1998: 68–69, 138).
- 26-104 **N. tenebrosa** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 70–72, 139. 1998. Brazil: Rio de Janeiro. [HT: HB; IT: RB].
- 26-105 **N. menescalii** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 73–74, 139. 1998. Brazil: Espírito Santo. [HT: HB; IT: RB].
- 26-105.1 **N. pernambucana** Leme & J.A. Siqueira, *Nidularium*—Bromeliads of the Atlantic Forest 232–237, 260. 2000. Brazil: Pernambuco. [HT: UFP; IT: HB].
- 26-106 **N. longipedicellata** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 74–75, 139. 1998. Brazil: Rio de Janeiro. [HT: HB; IT: HB].
- 26-107 **N. inexpectata** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 75–76, 139. 1998. Brazil: Espírito Santo. [HT: HB].
- 26-108 **N. brownii** Leme, *Pabstia* 8(1): 3–4, 6. 1997. Brazil: Minas Gerais. [HT: HFPG; IT: HB].
See Leme (1998: 76–77, 139).
- 26-109 **N. bragarum** (E. Pereira & L.B. Smith) Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 78–79, 134, 139. 1998.
BASIONYM: *Wittrockia bragarum* E. Pereira & L.B. Smith.
- 26-110 **N. brigadeirensis** Paula & Leme, *Pabstia* 8(1): 2, 7. 1997. Brazil: Minas Gerais. [HT: VIC; IT: HB, GFSP].
See Leme (1998: 79–80, 139).
- 26-111 **N. azevedoi** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 80–81, 139. 1998. Brazil: Bahia. [HT: HB].
- 26-112 **N. kerryi** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 82–83, 139. 1998. Brazil: Bahia. [HT: HB].
- 26-113 **N. mucugensis** Leme, *Canistropsis*—Bromeliads of the Atlantic Forest 83–85, 140. 1998. Brazil: Bahia. [HT: HB].
- 26-114 **N. bahiana** (Ule) L.B. Smith.
Formerly 32 in Smith and Downs (1979). See Leme (1998: 86–89, 134–135, 140).
SYN.: *Neoregelia bahiana* forma *viridis* (L.B. Smith) L.B. Smith.
SYN.: *Neoregelia diamantinensis* E. Pereira.
SYN.: *Neoregelia hatschbachii* L.B. Smith.
SYN.: *Neoregelia pabstiana* E. Pereira.
- 26-114ii **N. bahiana** forma *viridis* (L.B. Smith) L.B. Smith.
Formerly 32b in Smith and Downs (1979).
= *Neoregelia bahiana* (Ule) L.B. Smith. See Leme (1998: 86–89).
- 26-115 **N. paulistana** E. Pereira.
Formerly 58 in Smith and Downs (1979). See Leme (1998: 90–92, 136, 140).
- 26-116 **N. diversifolia** E. Pereira.
Formerly 24 in Smith and Downs (1979). See Leme (1998: 93, 136, 140).

27 CRYPTANTHUS Otto & Dietrich. See Ramírez (1998).

- 27-1 **C. glazioui** Mez.
Published as *Cryptanthus glaziovii*.
- 27-1.1 **C. pseudoglazioui** Leme.
Published as *Cryptanthus pseudoglaziovii*.
- 27-1.2 **C. caulescens** I. Ramírez, Harvard Pap. Bot. 3(2): 216–218. 1998. Brazil: Espírito Santo. [HT: HB].
- 27-1.3 **C. microglazioui** I. Ramírez, Harvard Pap. Bot. 3(2): 219–220. 1998. Brazil: Espírito Santo. [HT: SEL].
- 27-1.4 **C. leuzingeriae** Leme, Bradea 8(21): 115–116, 120. 1999. Brazil: Espírito Santo. [HT: HB].
- 27-2.2 **C. sergipensis** I. Ramírez, Harvard Pap. Bot. 3(2): 219–221. 1998. Brazil: Sergipe. [HT: NY].
- 27-4.1 **C. warasii** E. Pereira.
See Byer (1997).
- 27-5.7 **C. lutherianus** I. Ramírez, Harvard Pap. Bot. 3(2): 217–219. 1998. Brazil: Espírito Santo. [HT: SEL; IT: MO, RB].
- 27-7.2 **C. diamantinensis** Leme, Harvard Pap. Bot. 4(1): 137–138. 1999. Brazil: Bahia. [HT: HB].
- 27-8.8 **C. arelii** H. Luther, Cryptanthus Soc. J. 14(2): 54–55. 1999. Brazil: Bahia. [HT: HB; IT: SEL, US].
- 27-8.9 **C. grazielae** H. Luther, Cryptanthus Soc. J. 13(2–4): 12–13. “1998” 1999. Brazil: Espírito Santo. [HT: HB; IT: SEL].
- 27-9a **C. bromelioides** Otto & Dietrich var. **bromelioides**.
Neotype: *Pereira 5637* (HB). See Ramírez (1998: 223).
- 27-9.1 **C. ubairensis** I. Ramírez, Harvard Pap. Bot. 3(2): 221–223. 1998. Brazil: Bahia. [HT: US; IT: RB, K, W, CEPLAC].
- 27-10i **C. zonatus** (Visiani) Beer forma **zonatus**.
Neotype: *Waras s.n.* (HB). See Ramírez (1998: 223).
- 27-15 **C. lacerdae** Antoine.
Neotype: *Foster 1176* (GH). See Ramírez (1998: 223).
- 27-17 **C. beuckeri** E. Morren.
Lectotype: *Morren Icon* (K). See Ramírez (1998: 223).
- 27-17.1 **C. lyman-smithii** Leme, Harvard Pap. Bot. 4(1): 135–137. 1999. Brazil: Bahia. [HT: HB; IT: CEPEC].

28 NIDULARIUM Lemaire. See Leme (1993; 2000: 1–187). The number sequence presented here is based on the latter work. Also see Wanderley and Moreira (2000: 1–9).

- 28-0 **N. amazonicum** (Baker) Lindman & E. Morren.
Authority cited incorrectly by Wanderley and Moreira (2000: 6–8).
=*Nidularium amazonicum* (Baker) Linden & E. Morren ex Lindman.
- 28-0 **N. ambiguum** Wanderley & Leme.
Formerly 3.1 in Luther and Sieff (1994).
=*Edmundoa ambigua* (Wanderley & Leme) Leme. See Leme (1997a: 52–54).
- 28-0 **N. angraense** E. Pereira & Leme.
Formerly 2.3 in Luther and Sieff (1994).
=*Canistropsis microps* (E. Morren ex Mez) Leme forma *microps*. See Leme (1998: 35–38).
- 28-0 **N. billbergioides** forma **azureum** E. Pereira.
Formerly 4ii in Luther and Sieff (1994).
=*Canistropsis billbergioides* forma *azurea* (E. Pereira & Leme) Leme. See Leme (1998: 50–51).
- 28-0 **N. billbergioides** (Schultes & Schultes f.) L.B. Smith forma **billbergioides**.
Formerly 4 in Smith and Downs (1979).
=*Canistropsis billbergioides* (Schultes f.) Leme forma *billbergioides*. See Leme (1998: 45–49).
- 28-0 **N. burchellii** (Baker) Mez.
Formerly 1 in Smith and Downs (1979).
=*Canistropsis burchellii* (Baker) Leme. See Leme (1998: 26–28).

- 28-0 **N. campos-portoi** (L.B. Smith) Leme.
= *Nidularium campos-portoi* (L.B. Smith) Wanderley & B.A. Moreira var. *campos-portoi*.
- 28-0 **N. correia-araujoi** E. Pereira & Leme.
Formerly 1.3 in Luther and Sieff (1994).
= *Canistropsis correia-araujoi* (E. Pereira & Leme) Leme. See Leme (1998: 32–33).
- 28-0 **N. edmundoi** Leme.
Formerly 9.1 in Luther and Sieff (1994).
= *Niduregelia edmundoi* (Leme) Leme. See Leme (2000: 178–179).
- 28-0 **N. exostigmum** Tardivo.
Formerly 8.3 in Luther and Sieff (1997).
= *Nidularium innocentii* Lemaire var. *innocentii*. See Wanderley and Moreira (2000: 1–9). Also see Leme (2000: 144).
- 28-0 **N. fraudulentum** Leme.
Formerly 8.1 in Luther and Sieff (1994).
= *Niduregelia fraudulenta* (Leme) Leme. See Leme (2000: 179–180).
- 28-0 **N. gracile** Tardivo.
Formerly 21.4 in Luther and Sieff (1997).
= *Nidularium procerum* Lindman. See Leme (2000: 100–109).
- 28-0 **N. innocentii** var. **bauense** Reitz.
Formerly 8g in Luther and Sieff (1994).
= *Nidularium innocentii* var. *striatum* (Bull) Wittmack. See Leme (2000: 155).
- 28-0 **N. innocentii** var. **bicolor** E. Pereira.
Formerly 8f in Luther and Sieff (1994).
= *Nidularium bicolor* (E. Pereira) Leme. See Leme (2000: 49–51).
- 28-0 **N. innocentii** var. **paxianum** (Mez) L.B. Smith.
Formerly 8e in Smith and Downs (1979).
= *Nidularium innocentii* Lemaire var. *innocentii*. See Leme (2000: 144).
- 28-0 **N. innocentii** var. **wittmackianum** (Harms) L.B. Smith.
Formerly 8b in Smith and Downs (1979).
= *Nidularium longiflorum* Ule. See Leme (2000: 159).
- 28-0 **N. insularis** E. Pereira & Leme.
Formerly 21.1 in Luther and Sieff (1994).
= *Nidularium procerum* Lindman. See Leme (2000: 100).
- 28-0 **N. longiscapum** B.A. Moreira & Wanderley, Acta Bot. Brasil. 14(1): 121–123. 2000.
Brazil: São Paulo. [HT: SP; IT: RB].
= *Nidularium corallinum* (Leme) Leme. E.M.C. Leme (pers. comm., May 2000).
- 28-0 **N. lymaniioides** E. Pereira & Leme.
Formerly 1.2 in Luther and Sieff (1994).
= *Canistropsis albiflora* (L.B. Smith) H. Luther & Leme. See Leme (1998: 31–33).
- 28-0 **N. lyman-smithii** Leme.
Formerly 2.5 in Luther and Sieff (1997).
= *Niduregelia lyman-smithii* (Leme) Leme. See Leme (2000: 180–181).
- 28-0 **N. microps** forma **acuminatum** E. Pereira & Leme.
Formerly 2ii in Luther and Sieff (1994).
= *Canistropsis microps* (E. Morren ex Mez) Leme forma *microps*. See Leme (1998: 35).
- 28-0 **N. microps** forma **bicense** (Ule) E. Pereira & Leme.
Formerly 2iii in Luther and Sieff (1994).
= *Canistropsis microps* forma *bicensis* (Ule) Leme. See Leme (1998: 40).
- 28-0 **N. microps** forma **elatum** E. Pereira & Leme.
Formerly 2v in Luther and Sieff (1994).
= *Canistropsis elata* (E. Pereira & Leme) Leme. See Leme (1998: 51).
- 28-0 **N. microps** E. Morren ex Mez forma **microps**.
Formerly 2 in Smith and Downs (1979).
= *Canistropsis microps* (E. Morren ex Mez) Leme forma *microps*. See Leme (1998: 35).

- 28-0 **N. microps** forma **pallidum** (L.B. Smith) E. Pereira & Leme.
Formerly 2iv in Luther and Sieff (1994).
=*Canistropsis microps* forma *pallida* (L.B. Smith) Leme. See Leme (1998: 39).
- 28-0 **N. neglectum** (Baker) Lindman.
=*Nidularium scheremetiewii* Regel. See Leme (2000: 67).
- 28-0 **N. neglectum** (Baker) Makoy Hort. ex Mez.
Formerly 15 in Smith and Downs (1979).
=*Nidularium scheremetiewii* Regel. See Leme (2000: 67).
- 28-0 **N. pauciflorum** Ule var. **pauciflorum**.
Formerly 13a in Smith and Downs (1979).
=*Nidularium longiflorum* Ule. See Leme (2000: 59).
- 28-0 **N. pauciflorum** var. **sanguineum** Ule.
Formerly 13b in Smith and Downs (1979).
=*Nidularium longiflorum* Ule. See Leme (2000: 159).
- 28-0 **N. pedicellatum** E. Pereira & Leme.
Formerly 10.1 in Luther and Sieff (1994).
=*Nidularium antoineanum* Wawra. See Leme (2000: 87).
- 28-0 **N. procerum** var. **cariacicaense** W. Weber.
Formerly 21c in Luther and Sieff (1994).
=*Nidularium cariacicaense* (W. Weber) Leme. See Leme (2000: 113).
- 28-0 **N. procerum** var. **kermesianum** (F. Müller ex Mez) Reitz.
Formerly 21b in Smith and Downs (1979).
=*Nidularium procerum* Lindman. See Leme (2000: 100).
- 28-0 **N. pulcherrimum** E. Pereira & Leme.
Formerly 2.2 in Luther and Sieff (1994).
=*Canistropsis pulcherrima* (E. Pereira) Leme. See Leme (1998: 40–41).
- 28-0 **N. purpureum** var. **albiflorum** (L.B. Smith) L.B. Smith.
Formerly 9b in Smith and Downs (1979).
=*Nidularium albiflorum* (L.B. Smith) Leme. See Leme (2000: 140).
- 28-0 **N. purpureum** var. **coeruleum** E. Pereira & Moutinho.
Formerly 9c in Luther and Sieff (1994).
=*Nidularium serratum* Leme. See Leme (2000: 111).
- 28-0 **N. regelioides** Ule.
Formerly 10 in Smith and Downs (1979).
=*Nidularium rutilans* E. Morren. See Leme (2000: 132).
- 28-0 **N. seidelii** L.B. Smith & Reitz.
Formerly 3 in Smith and Downs (1979).
=*Canistropsis seidelii* (L.B. Smith & Reitz) Leme. See Leme (1998: 42).
- 28-0 **N. selloanum** (Baker) E. Pereira & Leme.
Formerly 2.1 in Luther and Sieff (1994).
=*Canistropsis selloana* (Baker) Leme. See Leme (1998: 55–57).
- 28-0 **N. simulans** E. Pereira & Leme.
Formerly 1.1 in Luther and Sieff (1994).
=*Canistropsis simulans* (E. Pereira & Leme) Leme. See Leme (1998: 29–30).
- 28-0 **N. tenuisepalum** Leme.
Formerly 2.4 in Luther and Sieff (1994).
=*Wittrockia tenuisepala* (Leme) Leme. See Leme (1997a: 65–66).
- 28-0 **N. terminale** Ule.
Formerly 18 in Smith and Downs (1979).
=*Nidularium procerum* Lindman. See Leme (2000: 100).
- 28-0 **N. viridium** E. Pereira & Leme.
Formerly 21.2 in Luther and Sieff (1994).
=*Nidularium angustifolium* Ule. See Leme (2000: 96).
- 28-0 **N. weberi** E. Pereira & Leme.
Formerly 1.4 in Luther and Sieff (1994).
=*Aechmea weberi* (E. Pereira & Leme) Leme. See Leme (1997a: 80).
- 28-0 **N. wettsteinii** Mez.
Formerly 17 in Smith and Downs (1979).
=*Nidularium purpureum* Beer. See Leme (2000: 122).

- 28-1 **N. linehamii** Leme.
Formerly 2.6 in Luther and Sieff (1997). See Leme (2000: 44–47).
- 28-2 **N. ferrugineum** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 48–49. 2000.
Brazil: Espírito Santo. [HT: HB; IT: RB].
- 28-3 **N. bicolor** (E. Pereira) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 49–51. 2000.
BASIONYM: *Nidularium innocentii* var. *bicolor* E. Pereira, *Bradea* 1(29): 316. 1973.
- 28-4 **N. fulgens** Lemaire.
Formerly 5 in Smith and Downs (1979). See Leme (2000: 52–55).
- 28-5 **N. atalaiaense** E. Pereira & Leme.
Formerly 5.1 in Luther and Sieff (1994). See Leme (2000: 55–57).
- 28-6 **N. ferdinando-coburgii** Wawra.
Formerly 16 in Smith and Downs (1979). See Leme (2000: 58–60).
- 28-7 **N. utriculosum** Ule.
Formerly 20 in Smith and Downs (1979). See Leme (2000: 61–66).
- 28-8 **N. jonesianum** Leme.
Formerly 23.2 in Luther and Sieff (1997). See Leme (2000: 63–66).
- 28-9 **N. scheremetiewii** Regel.
Formerly 23 in Smith and Downs (1979). See Leme (2000: 66–69).
SYN.: *Nidularium neglectum* (Baker) Lindman.
SYN.: *Nidularium neglectum* (Baker) Makoy Hort. ex Mez.
- 28-10 **N. kautskyanum** Leme.
Formerly 23.1 in Luther and Sieff (1997). See Leme (2000: 70–72).
- 28-11 **N. mangaratibense** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 73–74.
2000. Brazil: Rio de Janeiro. [HT: HB].
- 28-12 **N. rosulatum** Ule.
Formerly 6 in Smith and Downs (1979). See Leme (2000: 74–77).
- 28-13 **N. fradense** Leme.
Formerly 6.1 in Luther and Sieff (1997). See Leme (2000: 77–80).
- 28-14 **N. bocainense** Leme.
Formerly 14.1 in Luther and Sieff (1994). See Leme (2000: 81–83).
- 28-15 **N. marigoi** Leme.
Formerly 10.2 in Luther and Sieff (1994). See Leme (2000: 84–86).
- 28-16 **N. antoineanum** Wawra.
Formerly 14 in Smith and Downs (1979). See Leme (2000: 87–90).
SYN.: *Nidularium pedicellatum* E. Pereira & Leme.
- 28-17 **N. meeanum** Leme, Wanderley & Mollo.
Formerly 21.3 in Luther and Sieff (1997). See Leme (2000: 90–92).
- 28-18 **N. catarinense** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 93–94. 2000.
Brazil: Santa Catarina. [HT: HB; IT: RB].
- 28-19 **N. azureum** (L.B. Smith) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 94–96. 2000.
BASIONYM: *Wittrockia azurea* L.B. Smith, *Smithsonian Misc. Collect.* 126(1): 36. 1955.
- 28-20 **N. angustifolium** Ule.
Formerly treated as a synonym of *Nidularium procerum* var. *procerum* Lindman in Smith and Downs (1977). See Leme (2000: 96–99).
SYN.: *Nidularium viridium* E. Pereira & Leme.
- 28-21 **N. procerum** Lindman.
See Leme (2000: 100–109).
SYN.: *Nidularium gracile* Tardivo.
SYN.: *Nidularium insularis* E. Pereira & Leme.
SYN.: *Nidularium procerum* var. *kermesianum* (F. Müller ex Mez) Reitz.
SYN.: *Nidularium terminale* Ule.
- 28-22 **N. viridipetalum** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 109–110.
2000. Brazil: Rio de Janeiro. [HT: HB].
- 28-23 **N. serratum** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 111–112. 2000.
BASIONYM: *Nidularium purpureum* var. *coeruleum* E. Pereira & Moutinho, *Bradea* 3(12): 90. 1980.

- 28-24 **N. cariacicaense** (W. Weber) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 113–114. 2000.
BASIONYM: *Nidularium procerum* var. *cariacicaense* W. Weber, Feddes Repert. 97: 124–126. 1986.
- 28-25 **N. angustibracteatum** Leme.
Formerly 9.2 in Luther and Sieff (1994). See Leme (2000: 115–117).
- 28-26 **N. amorimii** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 118–119. 2000.
Brazil: Bahia. [HT: HB; IT: CEPEC].
- 28-27 **N. alvimii** W. Weber.
Formerly 19.1 in Luther and Sieff (1994). See Leme (2000: 119–120).
- 28-28 **N. corallinum** (Leme) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 121. 2000.
BASIONYM: *Wittrockia corallina* Leme, J. Bromeliad Soc. 42(2): 51–53. 1992.
SYN.: *Nidularium longiscapum* B.A. Moreira & Wanderley.
- 28-29 **N. purpureum** Beer.
Formerly 9 in Smith and Downs (1979). See Leme (2000: 122–124).
SYN.: *Nidularium wettsteinii* Mez.
- 28-30 **N. itatiaiae** L.B. Smith.
Formerly 11 in Smith and Downs (1979). See Leme (2000: 125–126).
- 28-31 **N. altimontanum** Leme.
Formerly 19.2 in Luther and Sieff (1994). See Leme (2000: 127–128).
- 28-32a **N. apiculatum** L.B. Smith var. **apiculatum**.
Formerly 19a in Smith and Downs (1979). See Leme (2000: 128–130).
- 28-32b **N. apiculatum** var. **serrulatum** L.B. Smith.
Formerly 19b in Smith and Downs (1979). See Leme (2000: 131).
- 28-33 **N. rutilans** E. Morren.
Formerly 7 in Smith and Downs (1979). See Leme (2000: 132–136).
SYN.: *Nidularium regelioides* Ule.
- 28-34 **N. espiritosantense** Leme.
Formerly 7.1 in Luther and Sieff (1997). See Leme (2000: 136–138).
- 28-35 **N. rubens** Mez.
Formerly 22 in Smith and Downs (1979). See Leme (2000: 138–140).
- 28-36 **N. albiflorum** (L.B. Smith) Leme, *Nidularium*—Bromeliads of the Atlantic Forest 140–142. 2000.
BASIONYM: *Nidularium rubrum* var. *albiflorum* L.B. Smith, Contr. Gray Herb. 127: 20. 1939.
SYN.: *Nidularium purpureum* var. *albiflorum* (L.B. Smith) L.B. Smith.
- 28-37 **N. organense** Leme, *Nidularium*—Bromeliads of the Atlantic Forest 142–144. 2000.
Brazil: Rio de Janeiro. [HT: HB; IT: RB].
- 28-38a **N. innocentii** Lemaire var. **innocentii**.
Formerly 8a in Smith and Downs (1979). See Leme (2000: 144–153).
SYN.: *Nidularium exostigmum* Tardivo.
SYN.: *Nidularium innocentii* var. *paxianum* (Mez) L.B. Smith.
- 28-38b **N. innocentii** var. **lineatum** (Mez) L.B. Smith.
Formerly 8d in Smith and Downs (1979). See Leme (2000: 154).
- 28-38c **N. innocentii** var. **striatum** (Bull) Wittmack.
Formerly 8c in Smith and Downs (1979). See Leme (2000: 155).
SYN.: *Nidularium innocentii* var. *bauense* Reitz.
- 28-39 **N. campo-alegrense** Leme.
Formerly 8.2 in Luther and Sieff (1997). See Leme (2000: 156–157).
- 28-40 **N. picinguabense** Leme.
Formerly 12.1 in Luther and Sieff (1997). See Leme (2000: 158–159).
- 28-41 **N. longiflorum** Ule.
Formerly 12 in Smith and Downs (1979). See Leme (2000: 159–164).
SYN.: *Nidularium innocentii* var. *wittmackianum* (Harms) L.B. Smith.
SYN.: *Nidularium pauciflorum* Ule var. *pauciflorum*.
SYN.: *Nidularium pauciflorum* var. *sanguineum* Ule.

- 28-42a **N. campos-portoi** (L.B. Smith) Wanderley & B.A. Moreira var. **campos-portoi**, Acta Bot. Brasil. 14(1): 6. 2000.
BASIONYM: *Wittrockia campos-portoi* L.B. Smith, Smithsonian Misc. Collect. 126(1): 36. 1955.
SYN.: *Nidularium campos-portoi* (L.B. Smith) Leme.
- 28-42b **N. campos-portoi** var. **robustum** (E. Pereira & I.A. Penna) Leme, Nidularium—Bromeliads of the Atlantic Forest 166–167. 2000.
BASIONYM: *Wittrockia campos-portoi* var. *robusta* E. Pereira & I.A. Penna, Bol. Mus. Bot. Mun. Curitiba 62: 4. 1985.
- 28-43 **N. amazonicum** (Baker) Linden & E. Morren ex Lindman.
See Leme (2000: 167–170).
BASIONYM: *Karatas amazonica* Baker, Gard. Chron. II 25: 814. 1886.
SYN.: *Nidularium amazonicum* (Baker) Lindman & E. Morren.
SYN.: *Wittrockia amazonica* (Baker) L.B. Smith.
SYN.: *Wittrockia smithii* Reitz.
- 28-43b **N. amazonicum** var. **paulistanum** Wanderley & B.A. Moreira, Acta Bot. Brasil. 14(1): 1–9. 2000. Brazil: São Paulo. [HT: SP; IT: RB].
=*Nidularium krisgreeniae* Leme.
- 28-44 **N. krisgreeniae** Leme, Nidularium—Bromeliads of the Atlantic Forest 171–173. 2000. Brazil: São Paulo. [HT: HB; IT: SP].
SYN.: *Nidularium amazonicum* var. *paulistanum* Wanderley & B.A. Moreira.
- 28-45 **N. minutum** Mez.
See Leme (2000: 174–175).
SYN.: *Wittrockia minuta* (Mez) L.B. Smith.

28.1 CANISTROPSIS (Mez) Leme. See Leme (1998: 19–57). The number sequence presented here is based on that work.

- 28.1-1 **C. marceloi** (E. Pereira & Moutinho) Leme, Canistropsis—Bromeliads of the Atlantic Forest 24–26, 132, 137. 1998.
BASIONYM: *Neoregelia marceloi* E. Pereira & Moutinho, Bradea 3(12): 89–91, 99. 1980.
- 28.1-2 **C. burchellii** (Baker) Leme, Canistropsis—Bromeliads of the Atlantic Forest 26–28, 132, 137. 1998.
BASIONYM: *Aechmea burchellii* Baker, J. Bot. London 17: 231. 1879.
SYN.: *Nidularium burchellii* (Baker) Mez.
- 28.1-3 **C. simulans** (E. Pereira & Leme) Leme, Canistropsis—Bromeliads of the Atlantic Forest 29–30, 137. 1998.
BASIONYM: *Nidularium simulans* E. Pereira & Leme, Bradea 4(32): 228, 247. 1986.
- 28.1-4 **C. albiflora** (L.B. Smith) H. Luther & Leme, Canistropsis—Bromeliads of the Atlantic Forest 31–32, 132, 137. 1998.
BASIONYM: *Neoregelia albiflora* L.B. Smith, Arq. Bot. S. Paulo II. 1: 109. 1943.
SYN.: *Nidularium lymanoides* E. Pereira & Leme.
- 28.1-5 **C. correia-araujoi** (E. Pereira & Leme) Leme, Canistropsis—Bromeliads of the Atlantic Forest 32–34, 137. 1998.
BASIONYM: *Nidularium correia-araujoi* E. Pereira & Leme, Bradea 4(32): 230–231, 250. 1986.
- 28.1-6i **C. microps** (E. Morren ex Mez) Leme forma **microps**, Canistropsis—Bromeliads of the Atlantic Forest 35–38, 133, 137. 1998.
BASIONYM: *Nidularium microps* E. Morren ex Mez, Martius in Fl. Bras. 3(3): 218–219. 1891.
SYN.: *Nidularium angraense* E. Pereira & Leme.
SYN.: *Nidularium microps* E. Morren ex Mez forma **microps**.
SYN.: *Nidularium microps* forma *acuminatum* E. Pereira & Leme.
- 28.1-6ii **C. microps** forma **pallida** (L.B. Smith) Leme, Canistropsis—Bromeliads of the Atlantic Forest 39. 1998.
BASIONYM: *Nidularium microps* var. *pallidum* L.B. Smith, Arq. Bot. Estado São Paulo II 1: 57. 1941.
SYN.: *Nidularium microps* forma *pallidum* (L.B. Smith) E. Pereira & Leme.

- 28.1-6iii **C. microps** forma **bicensis** (Ule) Leme, Canistropsis—Bromeliads of the Atlantic Forest 40. 1998.
BASIONYM: *Nidularium microcephalum* var. *bicense* Ule, Ber. Deutsch Bot. Ges. 17: 5. 1899.
SYN.: *Nidularium microps* forma *bicense* (Ule) E. Pereira & Leme.
- 28.1-7 **C. pulcherrima** (E. Pereira) Leme, Canistropsis—Bromeliads of the Atlantic Forest 40–41, 138. 1998.
BASIONYM: *Nidularium pulcherrimum* E. Pereira & Leme, Bradea 4(32): 227–228, 246. 1986.
- 28.1-8 **C. seidelii** (L.B. Smith & Reitz) Leme, Canistropsis—Bromeliads of the Atlantic Forest 42–44, 133, 138. 1998.
BASIONYM: *Nidularium seidelii* L.B. Smith & Reitz, Phytologia 9(4): 257. 1963.
- 28.1-9i **C. billbergioides** (Schultes f.) Leme forma **billbergioides**, Canistropsis—Bromeliads of the Atlantic Forest 45–49, 133, 138. 1998.
BASIONYM: *Hohenbergia billbergioides* Schultes f., Roemer & Schultes in Syst. Veg. 7(2): 1253. 1830.
SYN.: *Nidularium billbergioides* (Schultes f.) L.B. Smith forma *billbergioides*.
- 28.1-9ii **C. billbergioides** forma **azurea** (E. Pereira & Leme) Leme, Canistropsis—Bromeliads of the Atlantic Forest 50–51. 1998.
BASIONYM: *Nidularium billbergioides* forma *azureum* E. Pereira, Bradea 4(32): 235, 253. 1986.
- 28.1-10 **C. elata** (E. Pereira & Leme) Leme, Canistropsis—Bromeliads of the Atlantic Forest 51–52, 138. 1998.
BASIONYM: *Nidularium microps* forma *elatum* E. Pereira & Leme, Bradea 4(32): 226–227, 240, 245. 1986.
- 28.1-11 **C. exigua** (E. Pereira & Leme) Leme, Canistropsis—Bromeliads of the Atlantic Forest 53–55, 133, 138. 1998.
BASIONYM: *Canistrum exiguum* E. Pereira & Leme, Bradea 4(25): 165–166, 168. 1985.
- 28.1-12 **C. selloana** (Baker) Leme, Canistropsis—Bromeliads of the Atlantic Forest 55–57, 138. 1998.
BASIONYM: *Quesnelia selloana* Baker, Handb. Bromel. 8: 87. 1889.
SYN.: *Nidularium selloanum* (Baker) E. Pereira & Leme.

28.2 EDMUNDOA Leme.

- 28.2-1a **E. lindenii** var. **lindenii** (Regel) Leme, Canistrum—Bromeliads of the Atlantic Forest 46–52, 101. 1997.
BASIONYM: *Nidularium lindenii* Regel, Ind. Sem. Hort. Petrop. for 1868: 78. 1869.
SYN.: *Canistrum lindenii* (Regel) Mez var. *lindenii*.
SYN.: *Canistrum lindenii* var. *pehnkii* Reitz.
- 28.2-1b **E. lindenii** var. **rosea** (E. Morren) Leme, Canistrum—Bromeliads of the Atlantic Forest 50–52, 101. 1997.
BASIONYM: *Canistrum lindenii* var. *roseum* (E. Morren) L.B. Smith.
SYN.: *Canistrum lindenii* var. *roseum* forma *humile* Reitz.
SYN.: *Canistrum lindenii* var. *roseum* forma *procerum* Reitz.
- 28.2-2 **E. ambigua** (Wanderley & Leme) Leme, Canistrum—Bromeliads of the Atlantic Forest 52–54, 102. 1997.
BASIONYM: *Nidularium ambiguum* Wanderley & Leme, Bradea 5(16): 168–169, 179. 1989.
- 28.2-3 **E. perplexa** (L.B. Smith) Leme, Canistrum—Bromeliads of the Atlantic Forest 54–55, 102. 1997.
BASIONYM: *Canistrum perplexum* L.B. Smith, Proc. Amer. Acad. Arts 70: 148. 1935.

29 GREIGIA Regel. See Will and Zizka (1999).

- 29-1 **G. sphacelata** (Ruiz & Pavón) Regel.
See Will and Zizka (1999: 226–229, 236–237).

- 29-2 **G. amazonica** L.B. Smith.
= *Aechmea confusa* H. Luther. See Luther ("1998"b: 224).
- 29-3 **G. pearcei** Mez.
See Will and Zizka (1999: 233–234, 236–237, 239).
- 29-4.1 **G. raporum** H. Luther, Selbyana 19(2): 224–225. "1998" 1999. Peru: Junin/Cusco.
[HT: USM].
- 29-8 **G. van-hyningii** L.B. Smith.
See Guess and Guess (2000a).
- 29-11.2 **G. atrocastanea** H. Luther, Selbyana 19(2): 218–219. "1998" 1999. Bolivia: La Paz. [HT: SEL; IT: LPB].
- 29-12 **G. sylvicola** Standley.
See Grant (1997b).
- 29-14 **G. oaxacana** L.B. Smith.
See Guess and Guess (2000a).
- 29-15.1 **G. cochabambae** H. Luther, Selbyana 19(1): 83–84. 1998. Bolivia: Cochabamba.
[HT: SEL; IT: LPB].
- 29-15.2 **G. vilcabambae** H. Luther, Selbyana 19(2): 225–226. "1998" 1999. Peru: Junin.
[HT: USM].
- 29-19 **G. landbeckii** (Lechler ex Grisebach) R. Philippi.
See Will and Zizka (1999: 231–233, 236–238).
- 29-20 **G. berteroi** Skottsberg.
See Will and Zizka (1999: 229–231, 236–238).
- 29-22 **G. columbiana** L.B. Smith.
See Grant (1997b).
- 29-22.1 **G. kessleri** H. Luther, Selbyana 19(1): 83–86. 1998. Bolivia: Cochabamba. [HT: SEL; IT: LPB].

31 BROMELIA Linnaeus.

- 31-39 **B. plumieri** (E. Morren) L.B. Smith.
= *Bromelia karatas* Linnaeus. See Grant and Zijlstra (1998: 96).
- 31-39.1 **B. karatas** Linnaeus.
SYN.: *Bromelia plumieri* (E. Morren) L.B. Smith.

34 ORTHOPHYTUM Beer.

- 34-6.1 **O. eddie-estevesii** Leme, J. Bromeliad Soc. 50(2): 55–57. 2000. Brazil: Minas Gerais. [HT: HB; IT: UFG].
See Braun (2000).
- 34-12.1 **O. lucidum** Leme & H. Luther, Selbyana 19(2): 189–190. "1998" 1999. Brazil: Minas Gerais. [HT: HB; IT: SEL].
- 34-13.1 **O. benzingii** Leme & H. Luther, J. Bromeliad Soc. 48(4): 148, 150–153. 1998. Brazil: Minas Gerais. [HT: HB; IT: SEL].
- 34-16b **O. disjunctum** var. **minus** L.B. Smith.
Correctly reported as var. *minus* in Smith & Downs (1979); incorrectly reported as var. *minor* in the protologue.

35 FASCICULARIA Mez. See Zizka et al. (1999). Also see Nelson and Zizka (1997).

- 35-1 **F. pitcairniifolia** (Berlin Hort. ex Verlot) Mez.
= *Ochagavia* species 2. See Zizka et al. (1999: 328–329).
- 35-2 **F. kirchhoffiana** (Wittmack) Mez.
= *Fascicularia bicolor* ssp. *canaliculata* E.C. Nelson & G. Zizka. See Zizka et al. (1999).
- 35-3 **F. micrantha** (Philippi) Mez.
= *Fascicularia bicolor* ssp. *bicolor*. See Zizka et al. (1999).
- 35-4 **F. litoralis** (Philippi) Mez.
= *Ochagavia* species 1. See Zizka et al. (1999: 329).

- 35-5(1) **F. bicolor** ssp. **bicolor**.
SYN.: *Fascicularia micrantha* (Philippi) Mez.
- 35-5(2) **F. bicolor** ssp. **canaliculata** E.C. Nelson & G. Zizka, New Plantsman 4(4): 236–238. 1997. Chile: Region X. [HT: SJ].
SYN.: *Fascicularia kirchhoffiana* (Wittmack) Mez.

36 CANISTRUM E. Morren. See Leme (1997a, 2000). The number sequence presented here is based on these works.

- 36-0 **C. cyathiforme** (Vellozo) Mez.
Formerly 3 in Smith and Downs (1979).
= *Wittrockia cyathiformis* (Vellozo) Leme. See Leme (1997a: 67–70).
- 36-0 **C. exiguum** E. Pereira & Leme.
Formerly 6.1 in Luther and Sieff (1994).
= *Canistropsis exigua* (E. Pereira & Leme) Leme. See Leme (1998: 53–55).
- 36-0 **C. giganteum** (Baker) L.B. Smith.
Formerly 5 in Smith and Downs (1979).
= *Wittrockia gigantea* (Baker) Leme. See Leme (1997a: 70–72).
- 36-0 **C. lindenii** (Regel) Mez var. **lindenii**.
Formerly 7a in Smith and Downs (1979).
= *Edmundoa lindenii* (Regel) Leme var. **lindenii**. See Leme (1997a: 46–49).
- 36-0 **C. lindenii** var. **pehnkii** Reitz.
Formerly 7d in Luther and Sieff (1994).
= *Edmundoa lindenii* (Regel) Leme var. **lindenii**. See Leme (1997a: 46–49).
- 36-0 **C. lindenii** var. **roseum** (E. Morren) L.B. Smith.
Formerly 7c in Smith and Downs (1979).
= *Edmundoa lindenii* var. **rosea** (E. Morren) Leme. See Leme (1997a: 50).
- 36-0 **C. lindenii** var. **roseum** forma **humile** Reitz.
Formerly 7c6 in Smith and Downs (1979).
= *Edmundoa lindenii* var. **rosea** (E. Morren) Leme. See Leme (1997a: 50).
- 36-0 **C. lindenii** var. **roseum** forma **procerum** Reitz.
Formerly 7c5 in Smith and Downs (1979).
= *Edmundoa lindenii* var. **rosea** (E. Morren) Leme. See Leme (1997a: 50).
- 36-0 **C. perplexum** L.B. Smith.
Formerly 6 in Smith and Downs (1979).
= *Edmundoa perplexa* (L.B. Smith) Leme. See Leme (1997a: 54–55).
- 36-1 **C. aurantiacum** E. Morren.
See Filho (1997); Leme (1997a).
- 36-2 **C. camacaense** Martinelli & Leme.
See Leme (1997a).
- 36-2.1 **C. sandrae** Leme, Bradea 8(21): 117–118, 121. 1999. Brazil: Bahia. [HT: HB].
See Leme (2000: 215–218).
- 36-2.2 **C. guzmanoides** Leme, Bradea 8(21): 116–117, 120. 1999. Brazil: Bahia. [HT: HB; IT: CEPEC].
See Leme (2000: 218–219).
- 36-2.3 **C. lanigerum** H. Luther & Leme, Bromélia 5(1–4): 19–22. “1998” 1999. Brazil: Bahia. [HT: SEL; IT: HB].
See Leme (2000: 214–215).
- 36-3 **C. auratum** Leme.
See Leme (1997a).
- 36-4 **C. seidelianum** W. Weber.
See Leme (1997a).
- 36-5 **C. montanum** Leme, Canistrum—Bromeliads of the Atlantic Forest 33–35, 101. 1997. Brazil: Bahia. [HT: HB; IT: SEL].
- 36-6 **C. fosterianum** L.B. Smith.
See Leme (1997a).
- 36-7 **C. triangulare** L.B. Smith & Reitz.
Author previously cited as L.B. Smith. See Leme (1997a).

37 WITTROCKIA Lindman. See Leme (1997a, 2000). The number sequence presented here is based on Leme (1997a).

- 37-0 **W. amazonica** (Baker) L.B. Smith.
Formerly 4 in Smith and Downs (1979).
=*Nidularium amazonicum* (Baker) Linden & E. Morren ex Lindman. See Leme (2000: 167–170).
- 37-0 **W. azurea** L.B. Smith.
Formerly 7 in Smith and Downs (1979).
=*Nidularium azureum* (L.B. Smith) Leme. See Leme (2000: 94–96).
- 37-0 **W. bragarum** E. Pereira & L.B. Smith.
Formerly 2 in Smith and Downs (1979).
=*Neoregelia bragarum* (E. Pereira & L.B. Smith) Leme. See Leme (1998: 78–79).
- 37-0 **W. campos-portoi** L.B. Smith var. **campos-portoi**.
Formerly 6 in Smith and Downs (1979).
=*Nidularium campos-portoi* (L.B. Smith) Wanderley & B.A. Moreira var. *campos-portoi*. See Wanderley and Moreira (2000: 6). Also see Leme (2000: 166–167).
- 37-0 **W. campos-portoi** var. **robusta** E. Pereira & I.A. Penna.
Formerly 6b in Luther and Sieff (1994).
=*Nidularium campos-portoi* var. *robustum* (E. Pereira & I.A. Penna) Leme. See Leme (2000: 166–167).
- 37-0 **W. corallina** Leme.
Formerly 7.1 in Luther and Sieff (1994).
=*Nidularium corallinum* (Leme) Leme. See Leme (2000: 121).
- 37-0 **W. echinata** Leme.
Formerly 1.2 in Luther and Sieff (1997).
=*Aechmea echinata* (Leme) Leme. See Leme (1997a: 79).
- 37-0 **W. ibitipocensis** Leme.
Formerly 2.2 in Luther and Sieff (1994).
=*Neoregelia ibitipocensis* (Leme) Leme. See Leme (1998: 67–68).
- 37-0 **W. leucophoea** (Baker) Leme.
Formerly 2.3 in Luther and Sieff (1994).
=*Neoregelia leucophoea* (Baker) L.B. Smith. See Leme (1998: 64).
- 37-0 **W. minuta** (Mez) L.B. Smith.
Formerly 3 in Smith and Downs (1979).
=*Nidularium minutum* Mez. See Leme (2000: 174–175).
- 37-0 **W. paradoxa** Leme.
Formerly 1.1 in Luther and Sieff (1994).
=*Aechmea paradoxa* (Leme) Leme. See Leme (1997a: 81).
- 37-0 **W. smithii** Reitz.
Formerly 5 in Smith and Downs (1979).
=*Nidularium amazonicum* (Baker) Linden & E. Morren ex Lindman. See Leme (2000: 167).
- 37-1 **W. superba** Lindman.
See Leme (1997a).
- 37-2 **W. tenuisepala** (Leme) Leme, Canistrum—Bromeliads of the Atlantic Forest 65–66, 102. 1997.
BASIONYM: *Nidularium tenuisepalum* Leme, Bradea 5(29): 319–320, 322. 1990.
- 37-3 **W. cyathiformis** (Vellozo) Leme, Canistrum—Bromeliads of the Atlantic Forest 67–70, 103. 1997.
BASIONYM: *Tillandsia cyathiformis* Vellozo, Fl. Flum. 137. 1825; Icon 3. 1831.
SYN.: *Canistrum cyathiforme* (Vellozo) Mez.
- 37-3.1 **W. paulistana** Leme, Nidularium—Bromeliads of the Atlantic Forest 224–225, 260. 2000. Brazil: São Paulo. [HT: HB].
- 37-4 **W. gigantea** (Baker) Leme, Canistrum—Bromeliads of the Atlantic Forest 70–72, 103. 1997.
BASIONYM: *Nidularium giganteum* Baker, J. Bot. London 18: 50. 1880.
SYN.: *Canistrum giganteum* (Baker) L.B. Smith.

- 37-5 **W. spiralipetala** Leme.
See Leme (1997a).

38 HOHENBERGIA Schultes f.

- 38-15.1 **H. itamarajuensis** Leme & Baracho, Bromélia 5(1-4): 78-80. "1998" 1999. Brazil: Bahia. [HT: HB; IT: UFP].
38-16.1 **H. hatschbachii** Leme, Harvard Pap. Bot. 4(1): 141-142. 1999. Brazil: Bahia. [HT: MBM].
38-18.2 **H. undulatifolia** Leme & H. Luther, J. Bromeliad Soc. 48(4): 148-149, 151, 153-155. 1998. Brazil: Bahia. [HT: HB; IT: SEL].
38-21 **H. ridleyi** (Baker) Mez.
See Filho ("1998").
38-33.1 **H. tetaensis** Proctor & Cedeño-Maldonado, Harvard Pap. Bot. 4(1): 111-113. 1999. Puerto Rico: Salinas. [HT: US; IT: IJ, SJ].

40 AECHMEA Ruiz & Pavón.

- 40-11.2 **A. glandulosa** Leme, Harvard Pap. Bot. 4(1): 144-145. 1999. Brazil: Bahia. [HT: HB; IT: CEPEC].
40-18.2 **A. andersonii** H. Luther & Leme, J. Bromeliad Soc. 48(3): 127-129. 1998. Brazil: Bahia. [HT: HB; IT: SEL].
40-19 **A. mollis** L.B. Smith.
See Leme (1997a).
40-19.5 **A. paradoxa** (Leme) Leme, Canistrum—Bromeliads of the Atlantic Forest 81. 1997. BASIONYM: *Wittrockia paradoxa* Leme, Bradea 5(16): 170-171, 181. 1989.
40-19.6 **A. echinata** (Leme) Leme, Canistrum—Bromeliads of the Atlantic Forest 79, 103. 1997.
BASIONYM: *Wittrockia echinata* Leme, Selbyana 16(1): 121-122. 1995.
40-19.7 **A. weberi** (E. Pereira & Leme) Leme, Canistrum—Bromeliads of the Atlantic Forest 80. 1997.
BASIONYM: *Nidularium weberi* E. Pereira & Leme, Bradea 4(32): 231-232, 251. 1986.
40-19.8 **A. vasquezii** H. Luther, Selbyana 21(1,2): 129-130. 2000. Peru: Amazonas. [HT: MO].
40-23.9 **A. confusa** H. Luther, Selbyana 19(2): 224. "1998" 1999.
See Luther (1999c).
BASIONYM: *Greigia amazonica* L.B. Smith, Phytologia 8: 226. 1962.
40-23.11 **A. patriciae** H. Luther, J. Bromeliad Soc. 49(4): 160-161. 1999. Ecuador: Pastaza. [HT: QCNE; IT: SEL].
40-44.8 **A. aculeatosepala** (Rauh & Barthlott) Leme, Canistrum—Bromeliads of the Atlantic Forest 95. 1997.
BASIONYM: *Neoregelia aculeatosepala* Rauh & Barthlott, Trop. Subtrop. Pflanzenwelt 16: 53-57. (1976).
40-47 **A. polyantha** E. Pereira & Reitz.
See Gouda (2000a).
40-49 **A. meeana** E. Pereira & Reitz.
=*Aechmea rodriguesiana* (L.B. Smith) L.B. Smith. See Gouda (1999: 32).
40-49.1 **A. rodriguesiana** (L.B. Smith) L.B. Smith.
Formerly 164 in Luther and Sieff (1994).
SYN.: *Aechmea meeana* E. Pereira & Reitz.
40-51aai **A. aquilega** var. **aquilega** forma **alba** Oliva-Esteve, J. Bromeliad Soc. 49(2): 77-80. 1999. Venezuela: Carabobo. [HT: VEN].
40-56.1 **A. bicolor** L.B. Smith.
Formerly 101 in Smith and Downs (1979). See Leme (1997d).
40-56.2 **A. burle-marxii** E. Pereira.
Formerly 95.1 in Luther and Sieff (1994). See Leme (1997d: 8, 10).
40-56.3 **A. amorimii** Leme.
Formerly 101.1 in Luther and Sieff (1997).

- 40-56.4 **A. incompta** Leme & H. Luther, Selbyana 19(2): 186–187. “1998” 1999. Brazil: Bahia. [HT: HB; IT: SEL].
- 40-56.5 **A. lingulatoides** Leme & H. Luther, Selbyana 19(2): 187–189. “1998” 1999. Brazil: Bahia. [HT: HB; IT: SEL].
- 40-56.6 **A. canaliculata** Leme & H. Luther, Selbyana 19(2): 184–186. “1998” 1999. Brazil: Bahia. [HT: CEPEC; IT: NY].
- 40-56.7 **A. linharesiorum** Leme, Harvard Pap. Bot. 4(1): 145–147. 1999. Brazil: Bahia. [HT: HB].
Originally published as *Aechmea linharesii* (named for Sandra and Adilson Linhares).
- 40-81.1 **A. roseliae** H. Luther, Selbyana 19(1): 86–90. 1998. Ecuador: Napo. [HT: SEL; IT: US, QCA, QCNE].
- 40-81.2 **A. contracta** (Martius ex Schultes f.) Baker.
Formerly 114 in Smith and Downs (1979). See Luther (2000).
- 40-81.3 **A. brevicollis** L.B. Smith.
Formerly 7 in Smith and Downs (1979).
- 40-104.2 **A. pseudonudicaulis** Leme.
Formerly 143.1 in Luther and Sieff (1994).
- 40-123.2 **A. manzanaresiana** H. Luther, Selbyana 19(2): 222–223. “1998” 1999. Ecuador: Napo. [HT: SEL; IT: QCA, QCNE].
- 40-134.1 **A. cathcartii** C.F. Reed & R.W. Read.
Formerly 134.4 in Luther and Sieff (1994). See Luther (1997).
- 40-134.2 **A. wuelfinghoffii** E. Gross, Bromelie 1/1998: 13–15. 1998. Ecuador: Morona-Santiago. [HT: HEID].
- 40-141.1 **A. guarapariensis** E. Pereira & Leme.
= *Aechmea triticina* Mez. See Wendt (1993: 69). But see Silva and Leme (1999).
- 40-141.2 **A. roberto-seidelii** E. Pereira.
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- 40-142 **A. triticina** Mez.
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SYN.: *Aechmea roberto-seidelii* E. Pereira.
- 40-151.1 **A. maasii** Gouda & W. Till, Bromélia 4(1): 4–9. 1997. Brazil: Espírito Santo. [HT: U; IT: WU].
- 40-161 **A. saxicola** L.B. Smith.
See Leme (1997b).
- 41 QUESNELIA** Gaudichaud.
- 41-9.1 **Q. kautskyi** C. Vieira, Bradea 8(23): 131–134. 1999. Brazil: Espírito Santo. [HT: RB].
- 42 BILLBERGIA** Thunberg.
- 42-0 **B. mohammadii** R. Vásquez & Ibisch, Bromelie 1/2000: 11–13. 2000. Bolivia: Santa Cruz. [HT: LPB; IT: USZ].
= *Billbergia kuhlmannii* L.B. Smith.
- 42-37.1 **B. dasilvae** Leme, Harvard Pap. Bot. 4(1): 147–148. 1999. Brazil: Rondonia. [HT: HB].
- 42-40c **B. brachysiphon** var. *breviflora* H. Luther, Selbyana 19(2): 224. “1998” 1999. Ecuador: Zamora-Chinchipe. [HT: SEL; IT: QCA].
- 42-49 **B. kuhlmannii** L.B. Smith.
SYN.: *Billbergia mohammadii* R. Vásquez & Ibisch.
- 45 PSEUDANANAS** Hassler ex Harms. See Leal et al. (“1998”).
- 45-1 **P. sagenarius** (Arruda da Camara) Camargo.
See Fredericksen et al. (1999).
- 46 ANANAS** Miller. See Leal et al. (“1998”).

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